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ADDRESS

ON

THE IMPORTANCE AND ERADICATION OF SYPHILIS.

Delivered before the Rocky Mountain Medical Association, June 5, 1887.

BY HORATIO R. STORER, M.D.,

OF NEWPORT, R. I., PRESIDENT OF THE ASSOCIATION.

LADIES AND GENTLEMEN OF THE ROCKY MOUNTAIN MEDICAL ASSOCIATION:

In accepting the honor that you so kindly conferred upon me at St. Louis, the Presidency of our Association for the present year, I had hoped that I should be able to attend the Chicago meeting, for I appreciate your courtesy and fully share in your desire that the annual convocations of those who crossed the continent together in 1871, should increase in interest the nearer we approach that final passage into an unknown country that is before us all, and from which there is no return.

It seems to me that the older we become, self-limited as is our organization, and by its constitution unable like almost all other societies to take into itself any new or younger life, the more incumbent it is upon us to appreciate that each year our circle, already so limited through the decease of valued associates, contracts still closer upon itself, and thereby we are pressed into a more intimate companionship with each other, a nearer touch. Besides this, if more perfect union should give greater strength, to each as to all, we ought, I think, to feel with the increased sense of mutual sympathy and support that we possess as the effect of the tie of close corporationship, which is to be broken only by the decease of the last survivor of our number, that there are duties, correlative to the occasion that first united us, and as peculiar responsibilities to be measured only by the opportunities of exerting a deep public influence, that are yearly our own through our connection with the American Medical Association, as an integral part of its history.

The trip to California, pleasureable and health giving though it was to all of us, was undertaken for a more serious reason, and produced a weighty result. To many of us it was attended by much inconvenience and to all no slight expense, in both respects fully equalling indeed a summer's trip to Europe. The journey was in truth a mission; to convey the influence and authority of the National Association to a portion of the country that, rich as it might be in natural wealth, was yet in the regard referred to, virtually a professional wilderness. Practitioners there were there in abundance, graduates from the chief schools abroad as well as from our own, and already they had rival medical colleges and even journals. But as a whole, the physicians of the Western Coast were dissociated from each other, personal feuds were intense, empiricism was aggressive, and associative efforts for the common welfare were as yet limited, if not almost unthought of. The City and County Hospital of San Francisco was already known as affording remarkable facilities for studying affections depending upon the peculiar physical characteristics of the State and its still more novel mercantile and social as well as climatic phenomena. Mountain fever was to be found in its wards, no less than all the major aneurisms, while at the Insane Asylum at Stockton, which I visited with Dr. Scott, of San Francisco, there existed under Dr. Shurtleff's wise classification, an abundance of, to us of the East, unusual mental aberranciès. There was at once a fertile field for our study, and a rich realm for us to assist in bringing within the influence of the National Association.

The hearty reception that we received from our professional brethren, the cordial welcome from State and civic authorities, and from all the people to their private homes, is still as fresh in our minds as though it were but yesterday, and we are all conscious that while as a body the American Medical Association left its impress for good upon the State of California, we ourselves without exception became subject to influences which not only freshened our spirits and expanded our ideas, but opened our very selves to ways of thinking, to aspirations, charitable judgments, and tender and affectionate relations with that people of the far West, which we shall all carry with us, enduring and undimmed, throughout our lives.

Most intimate, however, of the ties that we then formed, warmest in sympathy and fraternal interest, because shared in by each and every one, is that of the members of our circle with one another. In the joys of each there should be a general participation, in the sorrows of each a common grief. Greater still is the influence felt when an occurrence of importance affects us collectively and as a whole. It is, therefore, with heartfelt emotion that I have to announce to you the recent decease of our most venerable associate, our patriarch, Dr. John Wadhams Russell, of

Mt. Vernon, Ohio, who died on March 22, 1887, in his eighty-third year, at his home.

Dr. Russell was a successful practitioner, especially as a surgeon, and was noted for his skill in removing vesical calculus. Indeed it was said of him by our biographer, Dr. Toner, that "he had performed as many, if not more, capital operations than any inland town surgeon in Ohio." Repeatedly offered a college chair, he preferred the less prominent but no less responsible duties of private life. He had studied his profession in South Carolina, at Yale College, the Berkshire Medical College, and at the Jefferson, in Philadelphia. He was, therefore, *nullius addictus jurare in verba magistri*, but from having been taught by numerous instructors, he had received a broader impress. He was a member of the Medical Society of Knox County, Ohio; of the State Medical Society, since its organization, and its President. He had been President of our own Association during its eleventh year, 1881-2, and delivered the Anniversary Address at St. Paul. He had also acted as President at the annual meeting of the previous year, at Richmond. At the meeting of 1883, at Cleveland, he is recorded as having made very impressive remarks, during which "as the most aged member of the Association, he dwelt upon the uncertainty of life, and the possibility of his soon being called away from his labors, and he admonished all to be ready for the great summons" which he has now, full of years and of honors, himself in person answered. A brief but feeling notice of the deceased was given by our Ex-President Davis, in THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, for April 2 last (page 381), and in the same journal for April 9, there were printed the obituary resolutions of the Knox County Medical Society, concerning their late member (loc. cit. page 419). Interesting biographical sketches of Dr. Russell will be found, by Dr. Wm. B. Atkinson, Permanent Secretary of the American Medical Association, in his volume upon the Physicians and Surgeons of the United States, Philadelphia, 1878, p. 242, and by our colleague, Dr. Toner, in his work upon the history of our own Association, pages 346 to 349. A good man has fallen. We shall ever cherish his memory. May he rest in peace.

In seriously deliberating what I should speak to you of upon the present occasion, it was clear that my topic, however I might select it, should be at least connected with our Rocky Mountain pilgrimage. It was as evident also to me that my subject should be of equal importance with our then mission, and though to offer you such, instead of mere reminiscences of our pleasant travel together, but increases the difficulties of my task, I have felt that in your behalf I had no right to evade the responsibility, lose the opportunity, or make light of the important duty, each of which considerations, as I have already said, is at our annually decreasing gatherings peculiarly incumbent upon the members of the Rocky Mountain Medical Association.

While the subject of this address was still undetermined in my mind, I received from Dr. Rohé, Chairman of the Section on State Medicine, of the American Medical Association, the request that I would read a paper upon some matter within its scope, at the Chicago meeting, and though I replied that to do so in the usual manner was impossible, so completely was my time occupied by the preparation of a paper for Dr. Bell's *Sanitarian*, upon the "Medals, Jetons and Tokens illustrative of Sanitation," a second chapter of the series that I began by the "Medals of Obstetrics and Gynæcology," published in November and December last in the *New England Medical Monthly*, as a part of my proposed work on the "Medallic History of Medicine," Dr. Rohé's letter has yet settled my decision regarding the topic I should present to you. Old men and aging women, as are we doctors and doctors' wives of this Association, have a valid right to give counsel. It is for our children in the profession to carry our views into practice. The higher and more universal our theme, the greater its claim upon their attention and assistance.

In asking your attention, therefore, to a brief statement of the permanent importance and progressive eradication of that bodily disease, by common consent acknowledged as the worst of all, I am recognizing the constantly increasing tendency of our profession towards preventing both public and private pestilence, which for a thousand reasons is so much better than permitting their foothold and then in vain, perhaps, attempting a cure. In what I shall say, I am virtually still further developing a paper that I read to the American Medical Association in 1878, and was published in its transactions, and I am securing your coöperation in a movement for the protection of Society from injury as fatal to its health and indeed its existence, as it is destructive to its morals. You will find, I trust, that repulsive as is the subject, it is yet one that can legitimately be brought before a refined circle like that of even our own lady members without any violation of propriety, and be quite sure to awaken them to take part in the preservative crusade to which Gross, Marion Sims and Gihon have given so great vitality.

That my choice of subject is singularly appropriate for your consideration will be evident for still another reason. In addition to the motives that we had in common for our transcontinental journey, in my own instance there was still another. I had been invited by the State Board of Health, of California, to deliver it an address upon "Female Hygiene." This was given, and perhaps attended by some of those now present, at the State House, in Sacramento, on April 28, 1871, and repeated, by request of the physicians of San Francisco, in the latter city upon May 25. In the course of that lecture, which was published in the First Biennial Report of the California State Board of Health (1871; appendix, pages 1 to 17), I alluded with some warmth to a statement that had appeared in the Transactions of the Third Session of the Medical Society of California. It ran as follows: "In no place of civilization do the causes (of ill health among women) exist or prevail to the same extent as in California." These causes, it was claimed, were chiefly "the yielding to the seductive allurements of dissipation. This applies," it was further stated, "equally to the married and unmarried; and so gen-

eral is it that I believe," said the writer quoted, "that I am correct, when I estimate two in every three females (in California) who have reached 15, to be victims of this dissipation." (*Loc. cit.*, 1858, p. 133).

In reading this statement, and in carefully re-reading it, it seemed to me that it could mean but one thing, and such was the impression of others whom I consulted. I therefore stated in my address at Sacramento that I thought that though the remark referred to had been written by a gentleman who lived upon the spot, it must in the very nature of things have been unintentionally greatly exaggerated. My referring to the matter at all gave rise to extremely great offense, and I was bitterly criticised by the writer in question for transferring his assertions from the oblivion of a strictly professional annual, and for radically misunderstanding their drift. Though it seemed to me at the time that in neither of these respects could I have been in error, I yet cordially regret at the expiration of nearly twenty years that I wounded our friend's feelings without intention, and frankly admit that had I then known what was afterwards claimed, that the apparently very plain and direct language of his paper referred only to the late hours, the dancing parties, and if within bounds innocent amusements which we do not always hesitate ourselves to permit to the young people of our families, I should have refrained from comment. The writer of whom I have spoken holds deservedly high rank in our profession both at home and abroad as a gynæcologist, and I am sorry that I was ever the means by so carelessly touching the self-inserted thorn, of causing him a moment's torture.

As a fitting sequence to what I have now said, I may mention that remaining in California long after most of our companions had returned to the East, no less time indeed than until the following October, I had abundant opportunity of studying the question that had thus early presented itself to me. I was admitted professionally into the families of many of the men of 1848 and 1849, which would have been the most likely of all to have suffered in the way indicated; I visited with the late Dr. Logan, of Sacramento, at that time Secretary of the State Board of Health, and subsequently President of the American Medical Association, the Chinese bagnios of San Francisco, at the request of the Governor of the State, and made careful inspection of their inmates; and I had abundant opportunities of observing the private cliniques as well as hospital practice of my medical friends, and I was as astonished at the general good health of the people as regards specific hereditary infection, as I had been when visiting the Chinese quarter, at the vital tolerance shown by the opium drunkards.

In nothing is the conservative force of Nature, in protecting the race as a whole, evinced more clearly than in her way of eliminating constitutional taints and impurities, alike by precipitating them downwards into the grave, and upon the other hand by throwing them off as froth thro' intermarriage with a healthier strain. Were it not for this, the race would by this time have become so generally impaired as to be corrupt, physically, through and through; but we may well take comfort if we consider what is seen in the naval and mercantile marine of this and other countries. Experts claim that there are hardly ten seamen in one hundred who earlier or later in life have not exposed themselves to specific disease. A very large proportion become affected, and yet, thanks to their good constitutions and good treatment (though often with no treatment at all, or even the very worst), how very few, comparatively, of sailors' wives and children are found constitutionally diseased. The evidence of specialists in specific disease, and of dermatologists, all goes to show that there is a terrific leaven of the kind at work in every community. They, of necessity, can take but a pessimistic view as to the future. Face to face with the sources of infection, presented to them from distant localities, for such cases naturally consult a physician as far away as may be possible from their own places of residence, syphilographers may well declare the human race but one foul sink. Let us hope that the gloomy anticipations of its possibly becoming such, may never be realized.

Equally, however, do many of those who take a more comprehensive, because more distant view of this endemic plague of civilization, agree with the observers who study the body politic as though really with the microscope. One can hardly take up a medical journal at random without being confronted with this spectre that will not be allayed. Most forcibly is the whole question presented in a very recent number of the *Sanitarian*, by Dr. C. E. Beardsley (*Loc. cit.* March, 1887, p. 205), and as an immediate result, we find his State (Ohio) Sanitary Association unanimously recommending the passage of a law that syphilis should be made a legal bar to marriage (Ibid., p. 280).

In my own paper upon "The Frequently Gynæcological Origin of Inherited Forms of Strumous Disease," to which I have alluded as having been read before the American Medical Association in 1878, I drew attention to five points relative to the main question, four of which are of a general bearing, but the fifth strictly gynæcological. These conclusions, then for the first time apparently so plainly stated, have not been challenged.

They are as follows:

1. Syphilis, like other toxæmias, is more proven to become constitutional in a strumous than in a perfectly healthy subject.

2. Struma, the result of syphilis, especially if from inheritance, though confessedly not uncommon, is comparatively seldom recognized as such during life, and still more unfrequently does it receive appropriate treatment.

3. Syphilitic struma, personal or by heredity, is in no sense self-limited.

4. The predisposition to syphilis by heredity (a very different thing from its inheritance), is both of itself and as affected by strumous and other antecedent dyscrasia, much more frequent and intense than is generally supposed.

5. The transference of primary syphilis being sometimes made by perfectly healthy women who are themselves entirely free from specific disease, this is an element not to be overlooked in the discussion of

syphilitic struma, as it bears vitally upon the questions, who are most prone to receive infection, how the virus is propagated, and in what way to attempt to restrain the spread of venereal disease.

I shall not at this time and in this presence do more than thus indicate the very practical directions in which, following these suggestions, both sanitarians and therapeutists may successfully move. Permit me to say, however, that while I am writing, corroborative evidence of their importance has been furnished by Dr. Wm. Henry Porter in an article in the N. Y. *Medical Record*, summarized in the *St. Louis Medical and Surgical Journal* for April 1887. Dr. Porter discusses the "Etiological Significance of Syphilis as a Factor of Disease in connection with Pulmonary Lesions," and among his conclusions are these: The pulmonary lesions attributable to syphilis are quite common, more so, however, in females than males. The disease is as frequently inherited as acquired. The lesion is most often at the apex, and generally involves both lungs. Cavities are found, and the changes are phthisical in so far that there exists progressive consolidation, followed by softening and the formation of cavities. The ultimate results of a case depend a great deal upon early recognition, before grave organic lesions have occurred.

There is reason, as I have said, to believe that the strumous diathesis renders the development of syphilitic phthisis, through direct or inherited infection, more likely to be determined. There is equal reason for the supposition that the occurrence of this latter will intensify the strumous taint—or at least evidence is as yet lacking that such is not the case. In whatever direction this may be at last determined, my own deductions will still prove true, namely:

1. That the more completely we prevent (by wise sanitation), control (by intelligent supervision), and perhaps cure (in certain cases by specific treatment), phthisis and other forms of strumous disease, to such an extent do we limit the probable infectious propagation and intensity of syphilis.

2. Similarly, the more actively we endeavor, by public and private measures other than those now indicated, to absolutely eradicate syphilis from any community, to such an extent do we limit the occurence, personal and by inheritance, of the various forms of strumous disease.

3. *A fortiori*, and even to a greater extent than has as yet been or can be effected by governmental or private attempts to control venereal disease by examining for or treating its primary lesions, by thus removing from our midst a large moiety of the material upon which the disease has thus far subsisted, we may hope eventually to get it under control.

What I have now said, and the many practical thoughts to which it cannot fail to give rise in your minds, will be considered, I trust, to suffice for the present occasion. Brevity is universally conceded to be the soul of wit. I shall have done my duty if without tiring you, I have indicated a direction in which, whenever occasion may permit, you may conscientiously throw your whole influence towards aiding the suppression of the fearful malady which pervades the community under the least suspected guises, and in quarters where its existence would never for a moment be imagined.

My task completed, I have to wish health, long life and happiness to you all, and many future pleasant reunions, perhaps some day even once more in California.

ORIGINAL ARTICLES.

MEDICAL WORK AMONG THE SIOUX INDIANS.

Read before the Dearborn County (Indiana) Medical Society, September 25, 1887.

BY FREDERICK TREON, M.D.,
PHYSICIAN TO CROW CREEK AGENCY.

I desire to give a brief outline of my work and experience among the Indians during the past year, hoping it may prove of interest to the profession, and that I may get suggestions that will aid me in the future.

The Indian, from constant exposure to the severe cold and extreme heat of Dakota, is liable to many diseases, often sleeping, when the mercury registers 40° below zero, on the cold ground with only a thin tipi for shelter and a dirty blanket to wrap up in; while during the summer, when the temperature reaches the extreme height of 120° F. in the shade, he exists upon the commonest food, often gorging himself with the native buffalo berries, plums, and choke cherries, and drinking the vilest water imaginable.

Consumption and Scrofula.—The first diseases to which my attention was directed, when I reached the Agency, were consumption and scrofula. Out of all the cases treated 87 have been of consumption and 30 of scrofula. Out of 57 deaths, 40 were from consumption, 4 from scrofula, and only 9 from other diseases, while 4 were accidental. Thus it will be seen that about 7 out of every 10 are dying from consumption. In my experience it has been the exception to find among the Crow Creek Indians—who are of the great Sioux tribe, and known as the Yanktonia Sioux—a good healthy subject. I find, basing my belief on the death-rate for the past year, that in less than another century this particular band of Indians will be extinct, and so far as they are concerned the great Indian problem will have been solved.

Consumption among these people appears, in the adults, always to follow an acute attack of bronchitis or catarrhal pneumonia; while usually the first symptom to which your attention is called in the child is a looseness of the bowels amounting at times to dysentery. The child grows weak, becomes emaciated, and often refuses food, while at other times it possesses a most ravenous appetite. At first the mesentery alone appears to be affected, but later on a cough sets in, dulness on percussion is perceptible over one and sometimes over both lungs, at the apex and not infrequently at the base. Mucous and crepitant râles are distinctly heard. Expectoration of a tough mucous character, and often frequent and copious hæmorrhages are present. I have yet to find a case in which there was any evidence or history of

rigors. I have never seen them have a chill. The symptoms I have described are not always present. The patient sinks rapidly and dies from asthenia. While the Indian is a patient sufferer, and possesses unlimited courage and fortitude, yet he dies very suddenly and when you least expect it.

I have noticed that patients that have enlarged glands and scrofulous sores do not, as a rule, have phthisis pulmonalis. I do not consider my experience sufficient to warrant me in saying this will not happen, but my observation for the year supports the assertion.

Syphilis and Gonorrhœa.—That these people are inoculated with some specific poison one cannot question, a disease that is hereditary and may have had its origin in syphilis; and yet I have my first case of an acute attack of that disease or of gonorrhœa to see among them—a most noteworthy fact.

Pneumonia.—During the spring of the year these people have a great deal of pneumonia and the mortality is heavy. It is not an uncommon thing to see the women, when winter is breaking, sitting in the water or rolling in the melting snow.

Eye Diseases.—Conjunctivitis appears among the Indians in the spring and autumn in an epidemic form, and often of a violent type, not infrequently terminating in ulceration and opacity of the cornea. I have had as many as 50 cases under treatment at one time. From the tainted condition of their blood the disease is often obstinate and difficult to manage. I have a case under treatment now, in which a girl, Maggie Moccasin, was sent home from the Wabash School, in Indiana, as incurable and hopelessly blind. The child aroused my sympathy from the fact that she was, aside from being a very bright child, able to speak very good English. I found her in a miserable, dirty hut, unable to cross the floor unless led. I tried to get her into the school so that I could treat her, and to this I obtained the Agent's consent, but there were were a great many objections to this and the idea had to be abandoned. At last I found a helper in the Rev. Mr. Burt, the Episcopal missionary, who, with his good wife, took her into their home and provided the child with every comfort and attention possible. She had complete opacity, with slight staphyloma of the left eye, while the right eye had almost a complete opacity; yet there was no bulging of the cornea. At first I thought I should perform iridectomy and make an artificial pupil for the left eye, but concluded to try treating the eyes, first with a 4 per cent. solution of atropia, and later with the yellow oxide of mercury ointment, giving her at the same time full doses of the syrup of iodide of iron. I can say that the results from the long and patient use of these remedies have been most gratifying; not only has the right eye cleared up, but the left has also been very much relieved and greatly improved. The child now sees to thread a needle and is beginning to read.

From the long severe winters I have seen a great many frost bites. I have seen any number of them with their cheeks frosted, and have treated a great many cases of frozen feet and hands.

Ulcerous Affections.—I next desire to mention a very peculiar and annoying ulcer that is very common among these people, and that I have never seen anywhere else. The first symptom is a severe pain, usually located upon the extremities; a circumscribed pain over a spot not larger than a nickel. This lasts for about forty-eight hours, when you can feel very distinctly a small hard substance like a shot, deep down in the tissues, very similar to that found in small-pox. About the third day there is a slight flush on the surface, then a small blister appears, which is always superficial; on the second or third day after the blister appears it breaks down, and a number of others appear in the same locality. A thin sanguineous fluid is discharged, and the blisters consolidate and form one large but superficial ulcer. After a few days resolution commences, healing over without leaving a cicatrix. One person may have these for a long time; when one crop heals, another appears. I have met with the best results in the treatment of this trouble by using an ointment made of the oil of cod, with an alterative given internally.

Schools.—The schools of Crow Creek and Winnebago Reservations are now in full operation, with good sanitary surroundings. We have a boarding-school at the Agency, a Catholic Mission 18 miles northwest, just completed at a cost of $20,000, and Miss Grace Howard's Mission, now nearing completion, is located twelve miles southeast from the Agency. This school is under the Episcopal Church, but erected by Miss Howard. It will be for returned Hampton pupils. These schools will accommodate about 400 children. The Indian child does not learn so rapidly, as a rule, as does the white child, but surely a good work is being accomplished; a work that will tend more to civilize these roaming, restless people in the future than any other one thing. My work in the schools has been the most successful; there the patients are directly under the care of the whites, and directions are carried out to the letter, but it is in the schools that I have found diseases in their epidemic forms.

Surgery.—I have not found a great deal of surgery to do, but desire to mention one or two cases that have interested me: One was a case in which a young Indian driving a reaper stopped to fasten up the trace of his inside pony. He neglected to throw his machine out of gear and, the flies being bad, the ponies started; he was caught in the sickle and his right leg nearly severed at the junction of the lower and the middle third; the fibula and tibia were both badly cut and mangled. At first I thought that nothing short of an amputation would save him, but concluded to be conservative and make an effort to save the limb. I had to treat him in a tipi on a bed made on the ground; this, however, was not a disadvantage, as it afforded him good hygiene. I made for him a rather ingenious arrangement in the shape of a camp-stool for the limb to rest in. This allowed of a free circulation of air under the injured member, gave excellent drainage, and at the same time made an admirable cushion. I used simply a wash of carbolic acid, and kept the limb in good position by means of side splints. I visited him often to see that the wound was kept clean and to look after his

condition generally. I removed a number of small spiculæ of bone, but the wound healed kindly and bony union took place by a provisional callus. After nine weeks of confinement I put on a brace and have him on crutches. I predict for him a fair limb and I am gratified with the results.

Malignant Disease.—I have met with but one malignant or cancerous tumor, and that was in a half-breed at Lower Brulé. He was under the charge of Dr. J. B. Graham, the Agency physician at that post. The disease was located upon the right shoulder and neck. We operated upon the patient a few weeks ago. The doctor first destroyed what he could of the growth with chloride of zinc and other caustics. We placed him under the influence of an anæsthetic, using the A. C. E. mixture, after which we cut away all we could with scissors. Then we scraped out the extensions with a sharp curette, after which we used the thermo-cautery at a white heat, cauterizing the entire surface. After this Dr. Graham used a dressing of chloride and oxide of zinc. I am informed that the wound has healed very kindly, and the patient is very much improved in general health.

Skin Diseases.—The Indian has a very delicate skin, with a very smooth surface and soft texture, which, from a lack of cleanliness, with their tainted condition, renders them highly susceptible to skin diseases. Itch is very common, and eczema, herpes and ichthyosis are often found among them. Shortly after I arrived at the Agency I was called to see "Skunk Robe," an Indian who was suffering with ichthyosis. I found him in a tipi in the grove near by. He told me he had been afflicted for some time. He was covered in places with scales, localized on the lower extremities and breast. He was quite old and a very devout Christian. I gave him internally cod-liver oil and, contrary to the advice of some authors, Fowler's solution. Locally I had him use a tar ointment and instructed him to keep clean and quiet. He went to his home on Crow Creek, about seventeen miles from the Agency, to which I frequently drove to see him. On my first visit to his home I found the disease very greatly aggravated and every imaginable space on his body covered with a dry, harsh, non-perspiratory, scaly, ill-nourished skin, showing the dark peculiar caking upon it so diagnostic of his trouble. Even the soles of his feet, as well as the crown of his head, were a mass of huge scales. I found him in a miserable old hut, dirty and illy ventilated, lying upon a cot too utterly dirty and filthy to describe. I learned that he had been in the habit of going out naked and rolling and bathing in the cold snow. To me the case was a most remarkable and interesting one, and I made that long drive a number of times to see him. I believe that if I could have succeeded in tiding him over until spring I might have, with the aid of a well ventilated tipi and the pure fresh air, at least afforded him some relief; but a new complication, in the nature of an acute attack of bronchitis, set in, due, no doubt, to the snow bath, and he died. I have to regret that I could not have brought him, with so rare a disease in such an aggravated form, before you, for you will doubtless never see one so bad as this. He reminded one more of a large fish than of a human being.

Parasites.—These people are constantly loaded with lice, both head and body. I have not infrequently seen the women "lousing" one another and eating the vermin. Once I saw a group of dirty squaws sitting on the ground and, as there were not enough to supply all, a shaggy dog was being gone over by one of them. As they eat a great deal of raw meat they have enormous tapeworms, as well as lumbricoids and ascarides.

Medicine Men.—These Indians, to an extent, still retain their native "medicine men," who are the most remarkable frauds imaginable. They treat their patients by "pow-wowing" and drumming over them and singing or chanting a most dismal song, which is a deep guttural sound and hideous in the extreme. Sometimes, however, they do administer remedies. I remember a case of conjunctivitis that fell into the hands of a "medicine man," who treated the eye by putting brass filings into it. You can easily guess the results. I have been told one of the ways by which they gain their knowledge and become "medicine men." They go on the hill-tops, and in the extreme heat lie with their faces to the ground for days, and refuse food or drink, until from exhaustion they become delirious; then it is, they claim, that a spirit comes to them in the shape of a wild animal, or sometimes it is a weed that speaks to them and sings them a song, telling them that the song will drive out certain diseases, or a certain herb will cure when administered by him. Then the man gets up and, with a drum, is a full-fledged doctor. You can always tell when they are at work, for they run up a medicine flag, red or yellow, which is to communicate with the Great Spirit, the sun or the moon, and is the fulfilling of a promise made by the "doctor" to the Great Spirit, for which he is to receive in return the restoration of the patient. The Indian believes that all diseases are the result of certain power delegated only to the medicine man. They think that consumption is produced by blowing into the system a seed of grass, and that he alone has power to heal them. They attribute headache to an evil spirit, and nothing but the drum and "pow-wow" will drive the spirit away. They believe, however, that a boil is the result of a silent shot from a duck, while a carbuncle is from the shot of a goose. When one of them gets very sick they have a medicine feast, and make medicine over the patient. I once attended a feast of this kind. The soup is made of dog; which, by the way, is considered a great luxury. They all eat while the "medicine man" beats a drum and sings or chants a most fearful and dismal ode, which is kept up for hours or until the soup is exhausted.

The Indians, as you may well suppose, are very superstitious, and if they can avoid it they never allow the patient to die in the house or tipi. If this happens they tear down the house, and never live in it again, no matter how good it is. I recall three instances in which this happened. They usually bury their dead in the ground, though some of them are placed on poles or in the trees, while others are set on the hills. Where a coffin is used they come for

it before the patient dies and, if possible, put them into it and carry them out of doors to breathe their last.

A very amusing incident occurred at the Agency some time ago. A squaw made complaint against her liege lord—who, by the way, was a "medicine man," and said he was not providing for her. He made a bold speech in his own defense, in which he said, with great pomposity: "I am better than other men; why? Because I am a doctor. I have ponies and cattle; why? Because I am a doctor. My body is worth gold; why? Because I am a doctor."

Not long since one of these medicine men called on me to prescribe for his son for retention of urine. I did so, and the boy soon recovered. I was not aware at the time that the fellow was a "medicine man," but one day he came to me and said: "My friend, my heart is very good; your medicine is good; my boy is well." I said, "How?" He then laid his hand on my arm and said he was a doctor and that I was a doctor, and we should be friends. He then shook my hand and went away.

But notwithstanding these people to some extent retain their medicine men, yet they appear to be progressing, and many of them have come to know that the white man's medicine is far superior to the mystifying, conjuring pow-wow of the Indian; and they are fast learning that the Indian doctor is a fraud. I am indeed encouraged and gratified with my work and the results. One very annoying thing, however, is that they have no idea of our plan of reckoning time, and medicine can only be given at intervals of about six hours, or three times a day, so that the physician must be exceedingly careful in what doses he prescribes and what he gives, for the Indian is liable to drink the contents of a bottle at one time.

But these people are surely progressing. When we stop to consider that only a dozen years ago they were a wild, savage race, huddled together in one large band, living in tipis along the Missouri, without an Indian house on the Reservation, and all in blankets, and that to-day nearly every one of them have their lands in allotment and are living in good comfortable houses, while many of them are clothed in citizens' dress, and are farming and getting for themselves herds of cattle and horses, we can but say that they have made a marvelous and rapid advance towards civilization; and I predict that the day is not far distant when they will be self-sustaining. With the aid of the efficient force of employés and the energetic missionaries at work, we hope for great achievements in the future.

Summary.—Cases treated in all, 790; patients visited in homes, 97; in tipis, 100. I have traveled to see sick on horseback 94 miles; have walked 97 miles; have traveled in spring wagon 1,170 miles. Births during the year, 55; deaths, 57.

September 25, 1887.

THE BURIAL REFORM ASSOCIATION of England is an organization that advocates early interment, and the use of perishable coffins to permit rapid disintegration after burial in the earth.

THE USE OF WATER IN THE TREATMENT OF RENAL AND HEPATIC DISEASES.

Read before the Northwestern Medical Society, January 10, 1888.

BY E. F. ELDRIDGE, M.D.,
OF NEW LONDON, WIS.

For the past five or six years I have been much interested in the cause, pathology and treatment of the various morbid conditions of the kidneys, more particularly in that departure from the normal that is quite frequently met with in this country, especially among business and professional men, which is the direct result of the ingestion of too great quantities of carbo-hydrates in the form of fat, sugar or starch, over-stimulation of the nervous system with alcoholic beverages, the immoderate use of tobacco, excessive mental activity, worry, lack of sleep, dissipation, etc. The frequency with which our attention is called to this condition and the subsequent history of these cases, if left to themselves, is such that it should excite our deepest sympathy, and receive our most earnest attention.

In these cases irritation and congestion (which finally become chronic) of the kidney are induced by the continued excretion of uric acid, the results of imperfect digestion or oxidation of albuminoids, the straining off of large quantities of partly converted starch in the form of sugar, or of an excessive amount of the different combinations of the phosphates from the destruction of nerve tissue. Tobacco and alcohol produce the same results; the former by paralyzing the coats of the arteries, and the latter by increasing the heart's action and raising the blood pressure. The result of either is to dilate the capillaries to twice their original calibre, and produce a condition of static congestion and functional incapacity. If this condition is allowed to continue, organic lesion is the result, and either diabetes mellitus or Bright's disease is the sequela.

In prescribing for these patients it is necessary to ascertain which of the above causes is the active one in the particular case under consideration, and remove it if possible; if not, as is often the case with worry, overwork, etc., to modify its influence by the aid of proper food, hygienic surroundings and suitable remedies, so as to reduce its injurious effects to a minimum.

The great struggle going on at the present day among professional and business men for the leading position in their respective callings is the result of a firm belief in the doctrine "that the survival of the fittest is the inevitable." In regard to health and life this is not true, and should be so understood by patients suffering from any of these maladies. Errors of diet and deportment must, of course, be corrected.

The second consideration is that of the removal of the waste material, or of getting rid of the "accumulated surplus" with which the system is loaded, and which is continually undergoing a retrograde metamorphosis, the result of which is the production of highly poisonous irritants in the form of uric acid, etc. In no way can this be accomplished (so far as I know) as rapidly as by solution or hydration; in

fact, this is the *only* way with which I am acquainted, that solids in this form can be removed from the system.

In looking for a solvent for these substances, I find none that can approach the capacity of *water*, the greatest solvent known, and, reasoning from the laws of chemistry, and the actual results of experiments, those waters that contain the smallest amount of salts, are capable of dissolving and holding in solution the greatest quantity of solids, and particularly those represented by combinations of lime, uric acid, etc.

I am thoroughly convinced that any and *all* waters that are in fact what they purport to be, *i. e.*, waters containing an unusual amount of mineral substances, are far inferior to those that are comparatively free from salts of all kinds.

While in practice in Boston I was in the habit of prescribing in these cases "Commonwealth Water" from the famous spring of that name situated near Waltham, Mass., that is a very pure water containing about 35 grains of solid ingredients to the gallon. I found this superior to any of the much vaunted waters of a higher specifice gravity, for the simple reason that it was not already saturated or loaded with solids in solution.

Early in the spring of 1883 I located in my present city, New London, Wisconsin, and the following season, after assuring myself of the feasibility of the undertaking, succeeded in inducing some of my neighbors to join with me in sinking an artesian well. The enterprise was successful, and for the past three years the inhabitants of our city have been enjoying the privileges of some twenty flowing wells that furnish thousands of gallons per day of the purest natural water that I have ever used, it containing less than 25 grains of mineral substance (about one-half of which is chloride of sodium or common salt, and the remainder largely magnesia, with a small amount of lime and potash; not any of which in such very small quantities are objectionable) to the gallon, without a trace of organic matter. This water is also highly charged with static electricity or magnetism.

Since this water became the common beverage I have been surprised and gratified to note the rapid improvement in patients suffering with chronic disease either of the liver or kidneys, and the almost entire absence of acute hepatic or renal disturbances. My serious attention was first called to these facts by the continued failure to report at my office of a number of patients that had been under my care. When questioned in regard to their absence, they replied that they had been drinking fountain water, and felt so much better that they did not need medicine. After carefully studying a large number of cases of kidney diseases and gouty tendencies in those who had been using a thorough course of these waters, and witnessing their rapid improvement, I am positive that the opinion expressed by my patients was well founded and in the main absolutely correct. In other words, I believe that a large majority of these cases would make a rapid recovery if they would correct *all* the errors of their mode of living and drink freely of *pure water*, *i. e.*, that which contains the smallest amount of solids, and of course *no* organic matter.

Sometimes these patients are anæmic and require the exhibition of ferruginous tonics or other reconstructive, represented by some form of phosphorus, cod-liver oil, bark, etc. Others may be suffering from some specific taint that will indicate alteratives in the form of the iodides, stillingia, hydrargyrum, etc., *i. e.*, the appropriate medication. I do not wish to be understood as condemning the employment of medicine in its proper place; far from it. What I *do* wish to emphasize is this: in these cases the most effectual way to rid the system of its accumulated load of waste material, and one that will not prevent the employment of any other, is to thoroughly *wash* the *entire* system (not simply the outside, until they appear like whited sepulchres, which indeed they are, full of dead men's bones and all uncleanness); but the inside as well, and at the same time stop their production and subsequent accumulation by the use of proper food, the observance of regular habits, with the continued ingestion of a sufficient quantity of pure water.

After a careful and quite extensive examination of its source, the different strata of sand through which it passes for more than twenty miles, the absolute impossibility of its contamination, from the fact that the vein is tapped at a depth of not less than 150 feet (the drill passing through three deposits of clay that are impervious and insoluble, the aggregate thickness of which is 75 feet), and the absence of mineral deposits which might affect it, with a careful analysis, and the results of clinical experience, not a single case of malarial or typhoid fever or any zymotic disease having developed for the past three years among any of those who were using fountain water in our city.

In view of all of these facts I am thoroughly convinced that it would be difficult, if indeed not impossible, to produce a water (either as a preventive or as a remedy in all hepatic and renal diseases, and especially those that are characterized by an accumulation of waste material in the system) that would equal that which is discharged from the many flowing wells of the city of New London, Wis.

A CASE OF CEREBRAL LOCALIZATION, WITH DOUBLE TREPHINING (ACQUIRED SPASTIC HEMIPLEGIA—PORENCEPHALUS).

Read before the Suffolk District Medical Society, January 11, 1888.

BY W. N. BULLARD, M.D.,
OF BOSTON.

The case I have the honor to report to you to-night derives its chief medical interest from the fact that the diagnosis of the lesion, and the localization of its seat were correctly made during the life of the patient, and that the latter was such as could be easily reached by a comparatively simple operation. Cases of operative interference in congenital cerebral lesions, or in those occurring in the earlier months of

life, are very rare, and I, therefore, believe it of importance that the possibility of localizing these lesions, and the probability that in certain cases, even though they be incapable of cure, their results can be mitigated, should be strongly emphasized. Until of late years, but little attention has been paid to the various forms of congenital or infantile cerebral lesions, excluding hydrocephalus and inflammations of the meninges. Patients suffering from congenital or infantile cerebral paralyses are too often considered not only absolutely incurable, but incapable even of improvement. Some cases unquestionably are so; but on the other hand, I believe that in many of this class of cases we can do much to improve and mitigate those symptoms which we cannot remove, and there is no doubt that a broad field lies open here for cerebral surgery, provided only that the neurologist can state with some degree of precision the condition existing within the cranium, and if the lesion be a localized one, point out its seat.

The present case occurred in the service of Dr. Bradford, at the Children's Hospital, and it is through his kindness and at his suggestion that I bring it before you to-night.

The patient was a boy, 4½ years old. There was no history of any nervous disease in the family, and no history of the patient was obtainable, except that he was supposed to have been in his present condition since birth. The delivery was by forceps, and the child had a scar and depression over the right parietal bone, supposed to have been caused by them. There was no history of convulsions at any time. The child was brought to the hospital by his parents, who insisted upon an operation—trephining over the depression—although they were informed that there was little hope of improvement from what they desired, and still less of cure. This operation had been decided upon before I saw the child.

I first saw the patient at the hospital on the 22d of June, 1887, when his condition was as follows:

The child was seated in bed. As a rule, he sits quietly all day, doing nothing. Expression vacant. Intelligence limited, although he has a certain sense of his surroundings, as was shown by his screaming one day when he was placed in a bed in another part of the ward, and pointing with his finger to the old one, and continuing this until he was replaced. He understands simple words and sentences, and obeys simple directions. He signifies when he is thirsty. When told to do so, he will turn his head, and he will hand an object to a person, or smell of a rose, when it is suggested to him. He can say "yes" and "no," and will say "good-bye" when any one is going away, but he cannot talk. He drules constantly.

Physical condition: Well nourished, well developed. Head large, rather square. On the right side, 5 cm. behind, and about 4 cm. above the upper edge of the anterior border of the pinna, there is a scar 5 cm. long, extending forwards and slightly upwards. This scar lies in front of the occipito-parietal depression, which is alike on both sides, and seems to cross the temporal ridge of the parietal bone, and the squamo-parietal suture. On palpation, there is an irregular knob or prominence under one portion of the scar, and a depression with irregularities on each side; that is, anteriorly and posteriorly. There is no decided tenderness here or elsewhere about the head. Nothing else abnormal was detected about the cranium.

All the special senses appear normal. There is right internal strabismus. Eyes not examined ophthalmoscopically.

Nothing abnormal could be detected about the trunk or organs of the thoracic or abdominal cavities. There was an occasional reduplication of the first sound of the heart.

The spine was straight; no tenderness in the back. The patient cannot use any of his extremities, but he uses those on the left much better than those on the right.

Upper extremities: The right upper extremity can be moved somewhat, but is never used. It is in a condition of spastic paralysis. The fore-arm is held semi-flexed upon the arm, and there is considerable resistance to passive motion, which can, however, be overcome after a time. The hand is firmly flexed on the forearm. He will not grasp anything with the right hand. He moves the left upper extremity much better than the right, and always grasps objects with the left hand, and then holds them firmly.

Lower extremities: The right lower extremity is smaller, and possibly colder than the left. There is a spastic condition of the knee and ankle. The foot is held flexed in the equinus position, with the toes pointing downwards. Some movement of the limb, however, is possible. He can flex at the thigh, knee, and ankle when he wishes. The left lower extremity is somewhat weak, perhaps from disuse; otherwise, nearly normal.

Knee-jerk exaggerated on both sides. Patient is unable to walk or to stand without support. He can take a step if supported under the arms, and he can hold his weight on the left leg. If the legs become locked at the knees, as they tend to do, he can support a portion of the weight of his body upon them. The sensation is apparently normal everywhere throughout the body. Nothing else abnormal detected.

To resume the case in short, we have here a boy. four and a half years old, with much diminished intelligence, inability to speak, inability to use any of his limbs well, and with right internal strabismus and right spastic hemiplegia. In addition, there is a well-marked cicatrix and depression in the right posterior parietal region.

After examination of the case it was decided, at my suggestion, that in addition to the operation already proposed, the cranium should be opened over the cortical motor area of the left side, as this seemed to offer the strongest prospects of relief.

The operation was, accordingly, performed on the 27th of June, by Dr. Bradford. The patient being etherized, the various points were localized on the shaven head, and the position of the fissures of Rolando determined as carefully as possible. Dr. Bradford trephined first on the right side of the head, directly over the cicatrix. A curved incision with its convexity downwards, about six inches in length, was

made through the scalp, the periosteum was removed intact, and the cranium trephined—the trephine used being an inch in diameter. The outer table of the portion of bone removed showed a fracture, and the inner a slight inequality, due to a fissure. The dura mater exposed was thickened. and its vessels filled with blood. It (the dura mater) was then incised, and the brain and pia exposed to view. There was no evidence of pressure, nor of anything abnormal here below the dura. The brain protruded slightly through the opening and pulsated. [It is important to note here the fact that, in spite of the fracture of the cranium, and the accompanying thickening of the dura mater, the pia and brain were, as far as could be told, absolutely normal.]

It was now decided that it would be wise to trephine over the probable seat of the lesion on the left side, and, at Dr. Bradford's request, I located the motor area on the left side, where it was presumable, from the symptoms, that the lesion would be found. This point was a little higher and slightly further forward than that trephined on the right, at the junction, as nearly as could be determined, of the middle and lower thirds of the fissure of Rolando. There was a very small superficial cicatrix in the skin here, not involving the deeper tissues of the scalp, and which had remained undetected until the position was marked. An incision similar to that made on the right side was now made here. The cranium, when uncovered, appeared perfectly normal. It was trephined, and, on the removal of the bone to which the dura was attached, a depression in the brain substance—porencephalic cavity—was exposed. This not only occupied the whole space directly under the opening, but also extended somewhat anteriorly. The pia seemed to be adherent. The brain substance in this depression, which was estimated as about 1½ inches long, by ¾ inch wide and ⅜ inch deep at the deepest part, was puckered and shriveled. Considerable hæmorrhage from the bone followed the removal of the button on this side. This was quickly controlled by plugging.

As the patient's condition was poor—pulse very weak, and respiration slow and labored—nothing further was attempted. After replacing the buttons of bone on each side, and stitching the dura mater on the right, the incisions were sewed up, and bandages and dressing applied.

The patient, however, never rallied thoroughly after the operation, although he recovered consciousness in the evening, and was conscious until the following morning, when he died at 10 A.M., about seventeen hours after the operation. The temperature was not taken on the evening following the operation, but the next morning rose to 105°. There was no autopsy.

This case, it seems to me, illustrates some interesting points. In the first place, it demonstrates the possibility of localizing lesions of this character (porencephalic) in children in certain cases. This is, of course, the first step in any rational attempt for their direct alleviation or cure. That these lesions can be localized with moderate accuracy at least, sufficiently for all practical purposes in a large proportion of the cases of this class, I am convinced, and I believe it to be the duty of the neurologist, so far as lies within his power, to improve and perfect his knowledge, so that, when appealed to by the surgeon, he shall be able to point out where the instrument should be directed, and to state what sort of lesion is likely to be found.

Secondly, I believe that this case may be accepted as evidence that these lesions—many of them, at least—can be reached by surgical interference without serious difficulty, since simple trephining can no longer be regarded as a serious operation in ordinarily healthy persons. If this be true, its importance is at once manifest. If these lesions can be localized, and if surgical interference in them is not a matter of serious difficulty nor of marked risk to the life of the patient, we have here at least one expedient which offers a prospect of alleviation in these cases, however remote.

It is well known to most of us, but I repeat it here for the sake of emphasizing it again, that there are no cases which, as a class, are regarded by the whole medical profession as more utterly hopeless and as more entirely beyond any possible medical aid and assistance than congenital and infantile brain affections. There is no class of cases in which the patients are more utterly useless to themselves and to the world, or more of a burden to their parents and relatives. Anything, therefore, which affords the least prospect of relief, is in them of the utmost importance.

There are two other points in this case which are of both neurological and surgical value, which I will refer to in short:

The first is the question of the advisability of trephining in more than one place at the same time in children. Whether, in this case, the result might have been more favorable had the operations been performed separately, it is impossible to decide; but in a similar case it would certainly seem more safe to perform two operations.

The second point is one which, although theoretically well known, cannot be repeated too often, and it is well illustrated here. This is that, in spite of a fracture or visible injury on one side, the actual cerebral lesion may be upon the opposite, whether produced by direct violence or by *contre-coup*. Therefore, in case of cerebral injury, if the symptoms point to a lesion on the opposite side from the trauma; for example, if the hemiplegia is on the same side of the body as the fracture of the cranium, we should not trephine at the place of fracture, but on the other side.

In the case of our patient, the probability is that the whole trouble was traumatic, and due to the pressure of forceps. While on the right the parietal bone was fractured, on the left, the bone being more yielding or the blade being in a slightly different position, or for some other reason, a different effect was produced. This was probably the rupture of the ascending parietal artery or one of its branches.

THE BRITISH NURSES ASSOCIATION is the name of an association formed in London on February 13.

THE USE OF SACCHARIN IN DIABETES.

BY CHARLES W. PURDY, M.D.,
OF CHICAGO, ILL.,
HON. FELLOW OF ROYAL COLLEGE OF PHYSICIANS AND SURGEONS, KINGSTON, ONT.

Sufficient time has now elapsed since the introduction of saccharin to permit extended observations of its physiological effects upon the organism, as well as to learn something of its therapeutical properties. This time, happily, has been improved by numerous observers, especially by Stahlman, Salkowski, Stutzer, Adducs, and Leyden, to whom we owe much of our knowledge upon this subject.

We know that this agent is absolutely innocuous to the system, even when administered in sufficient quantity to equal in sweetening power three pounds of sugar a day, and continued indefinitely. The fact that large contracts have recently been made for the supply of saccharin for military use, both by the German and the Russian governments, indicates clearly its harmlessness as a flavoring agent for food and drink.

With an agent so harmless, and possessing a sweetening power more than three hundred times that of sugar;[1] we naturally turn to diabetes as a useful field for its employment; since the deprivation of sugar—always so essential in successfully treating these cases—is often one of the severest trials to the patient in the enforcement of the diabetic dietary. Simply as a flavoring agent saccharin leaves little to be desired as a substitute for sugar, save its sparing solubility. It is of course entirely devoid of nutritious properties.

From a liberal use of saccharin in my practice since its introduction I have not yet met with a single instance in which its palatability was suggested as in the least inferior to that of the purest sugar.

The most desirable form for the use of saccharin by diabetic patients is that of tablet; since in this form a combination may be made—usually with an alkaline carbonate—which renders the saccharin perfectly soluble in water. I have made numerous trials and experiments with the several forms of saccharin tablets at present on the market, both here and in Europe. Most of these have been found quite soluble, but they contain rather an excess of saccharin which I think in some respects objectionable. From a grain to a grain and a half of saccharin will render a cup of tea or coffee about as sweet as will two lumps of white sugar; and I find that while most patients crave the flavor of sugar, some resent an excess of it, and therefore the tablet must be broken—and consequently in part wasted—in order to get the desired grade of flavor. The tabloids I am now using are made for me by Parke, Davis & Co., of Detroit, and contain each 25 milligrammes of saccharin, in the shape of soluble salt, and these give entire satisfaction.

In addition to its use as a flavoring agent for food and drink saccharin possesses properties that render it valuable as a medicinal agent in the treatment of diabetes. It possesses decided antiseptic properties, estimated by trustworthy observers about equal to that of salicylic acid and thymol. On the other hand, saccharin exerts no action on ptyalin or pepsin, and, moreover, it seems to have no secondary action on the digestive secretions—passing unchanged through the organism, to be eliminated by the kidneys, as do benzoic acid and resorcin—imparting its antiseptic properties to the urine.

In diabetes, as is well known, the necessary ingestion of a food mostly of a nitrogenous character often weakens the digestive power of the stomach and flatulent dyspepsia is the result. Now in saccharin we possess an agent that very much retards the abnormal fermentative changes in the stomach; and its tendency therefore is to preserve the food from such changes until the tardy flow of gastric juices finally reaches and digests the whole contents of the stomach—just as does carbolic acid and such agents relieve flatulent dyspepsia.

We are perhaps justified in looking for another possibly beneficial action of saccharin in diabetes, based upon its antiseptic properties, though thus far our knowledge rests mostly upon a theoretical foundation. When we consider the strong tendency to fermentative action in the blood of diabetic patients, as is evidenced by the frequency of multiple furunculus and anthrax, as well as Kussmaul's coma; we can scarcely resist the conviction that the passage of such an antiseptic as saccharin through the blood—especially in large doses—cannot but have a modifying influence upon these fermentative changes. Theoretically then at least, saccharin if given in considerable quantities might be expected to exert a most beneficial influence over those blood changes in diabetes from whence spring complications comprising the most serious and fatal features of the disease.

In brief, then, we are justified in the following conclusions in reference to the use of saccharin in diabetes:

First, that in this product we possess a flavoring agent for food and drink the palatability of which is quite equal to that of the finer grades of sugar, and which may be used by diabetic patients with the greatest impunity.

Second, that through its antiseptic properties it retards the abnormal fermentative changes in the stomach so common in diabetic patients—thus promoting digestion aud relieving flatulence.

Third, that while as yet we are without sufficient practical data to judge of its blood effects in large doses to diabetic patients, yet both chemistry and physiology would indicate its use for the purpose of favorably influencing some of the more fatal complications of the disease.

163 State St., Chicago, Feb. 13, 1888.

[1] One part of saccharin can be distinctly tasted in 10,000 parts of water.

PROFESSOR NAUNYN, lately appointed to the Chair of Medicine in the University of Strassburg, will begin his course on April 1. For his vacated chair at Königsberg the names of Strümpell, Quincke, and Lichtheim are mentioned.

MEDICAL PROGRESS.

ANTIPYRIN IN MIGRAINE.—DR. W. H. RUSSELL FORSBROOK has prescribed antipyrin in 100 cases of migrain. He has found that antipyrin given in 15-grain doses every twenty minutes, three times consecutively, almost invariably removes the pain, depression, drowsiness, and nausea, so that in forty minutes, frequently even after one dose, patients express themselves quite well. A single dose, if given during the premonitory signs, will often ward off an attack. The few cases that are not amenable to the speedy action of the medicine, appear to have the duration of the attack much shortened. Further, the period between the attacks has seemed to be prolonged; and succeeing attacks have not been so severe. The pulse, which is generally slowed during an attack of migraine, appears in some cases to be rendered fuller and quicker. Antipyrin, when given to young women for migraine, sometimes produces a species of intoxication, so that it is as well to be on one's guard; although, as far as his experience goes, the only result has been the almost certain and immediate relief from the peculiar pain. (*The Lancet*, December 10, 1887, p. 1163.) During the last two month, Dr. Kingsbury, of Blackpool, has treated twenty cases of migraine with antipyrin. Several of the patients had suffered for over ten years, and, finding all drugs useless, had become reconciled to being periodically prostrated for one or two days. In all the cases he ordered 8 grains of antipyrin, dissolved in water or lemonade, to be repeated every half hour, the patient lying down. Most of the cases were quite cured by two powders; the most obstinate yielded to three; in no case did the antipyrin fail. A cup of warm tea sometimes seemed to help, and the only inconvenience due to the treatment was, in a few of the cases, considerable sweating. Many of the patients could hardly credit that instead of being utterly helpless for twenty-four hours, they could now cut short an attack in one hour. Another great advantage of antipyrin is that it prevents as well as cures these attacks. One lady, who cannot remember having fewer attacks than three a month, each lasting about thirty-six hours, has been quite free for eight weeks, and this she attributes solely to the occasional use of antipyrin powder. (*Brit. Med. Journ.*, December 24, 1887.) In a letter on this subject Dr. N. E. Davies says that in the cases where he has tried it the effect of antipyrin has simply been marvellous. In one case of a lady, who for years had been the subject of most distressing periodical attacks of intense pain referred to the occiput that defied all ordinary remedies, this drug relieved at once, and the depressing fear of impending attacks disappeared. It leaves no ill effects whatever—a great desideratum. Ten grains repeated every hour for two or three hours is his plan of giving the drug, and then at intervals of six hours for a day or two after to prevent all chance of a recurrence, this generally being at the desire of the sufferer.

MR. T. J. BOKENHAM says: Antipyrin has for the past few months attracted considerable attention in Germany on account of its astonishing action on the paroxysms of migraine. In England, however, until quite recently, the drug does not appear to have been much used in this disease. When it has been tried at all, the doses given have been large, and have in some instances been found to produce unpleasant effects. During the last two months I have had an opportunity of treating as many as twenty-six cases of migraine with antipyrin. The results have been in every case perfectly satisfactory, although the dose given has been quite small, in no case exceeding 4 grains. I will only describe three typical cases: namely that of a near relative: that of a girl, members of whose family exhibit epileptic tendencies; and an attack as occurring in myself.

My own migraine is usually brought on by over-use of the eyes, and is almost invariably preceded by well-marked teichopsia, which lasts for from half an hour to several hours. As the attack proceeds, I get a tender spot on some part of the scalp, generally on the right parietal region, a vascular disturbance, with throbbing behind the right eye. The first time I took antipyrin it was in a dose of 3 grains after the pain was well developed. In a very short time the throbbing entirely ceased, leaving only a dull aching pain behind the eye; the flushing of the face also diminished. After half an hour I took a second dose of 3 grains, and by the end of an hour from the time of taking the first dose was quite well, save for slight tenderness of the scalp. Since then I have tried the drug, in the same dose, taking it immediately the teichopsia comes on, with complete success in altogether preventing the attack.

The second case is that of a lady who has been subject to attacks of migraine for many years. The starting point of her attacks is also in the eyes. For a long time large doses of ammonium bromide were successful in cutting short the attacks, but recently this drug seems to have lost most of its power. Antipyrin entirely relieved the prostration and pain after the second dose of 3 grains.

The third case is interesting in that it points to another class of cases in which antipyrin may be of use, namely epilepsy. Here the mother is epileptic, the father is of a very excitable temperament, and another member of the family shows signs of weak intellect. In this case migraine usually follows any undue fatigue, and is attended with a good deal of prostration. I happened to be with her during one attack and promptly administered antipyrin. The headache yielded entirely after the second dose of 4 grains.

I have under observation also two epileptics, in whom the fits are preceded by a well-marked aura in the shape of tingling of the extremities of the fingers. They are directed to take, immediately they feel this sensation, 10 grains of antipyrin in a little water. If the theory of Dr. Liveing concerning the close pathological relation between migraine and the other so-called paroxysmal neuroses be true, there is some hope that in both these diseases we may be able to check or to cut short the attack by the timely use of antipyrin. I have not yet had the op-

portunity of observing the effect on these two epileptics, but it would certainly seem to be worth a trial.

The plan I have pursued with so much success in this series of cases is to give very small doses, contrary to the practice of most physicians, who have used as much as 15 grains repeated every twenty minutes. I feel sure that antipyrin requires only to be known to become a regular remedy in the treatment of migraine and that practitioners will use the small dose with less hesitation than they would the large ones previously given.—*The Practitioner*, February, 1888.

Causes of Subcutaneous Inflammation and Suppuration.—Grawitz and De Bary (*Archiv für Patholog. Anat. u. Physiol. u. für klin. Medicin*, Bd. 108), report some experiments showing that the introduction of pus-bacteria into the subcutaneous tissues is not in itself sufficient to cause suppuration, but that other factors must be present to furnish a suitable condition for their growth and multiplication. In their experiments they carefully cleansed and disinfected the integument at the proposed site of injection, used a thoroughly clean needle of small caliber, and immediately closed the wound made by the needle with iodoform collodion. It was found that with these precautions large quantities of neutral fluids were absorbed after subcutaneous injection, both when sterilized and when infected with the *Staphylococcus pyogenes aureus* or *citreus* to a greater extent than the most careless experimenter would ever accidentally infect sterilized fluids. They therefore consider the wound made by the needle to be the point of danger, as the bacteria are held here, multiply, and spread through the tissues, while those in the meshes of the subcutaneous tissue are absorbed before they can do damage. In this way they explain the observation of Uskoff that suppuration was produced by the injection of large quantities of neutral fluids, and negative the assertion of Orthmann that the suppuration so produced was due to the admixture of bacteria. In some cases the integument over the injected fluid died, and in these cases suppuration occurred. Histologically, the connective-tissue cells at the site of the injection were found swollen and nuclear. When the solution had been colored with methyl-blue, the coloring could be plainly seen in the sheaths of the neighboring nerves, demonstrating that narcotic substances so injected probably exercise a local effect. Subcutaneous injections of certain germicidal irritant fluids—such as a solution of bichloride of mercury (1 to 1,000), absolute alcohol, and tincture of iodine—were followed by severe inflammation, but no suppuration unless the integument became necrotic. After successive injections of solutions of chloride of zinc, varying from 1 to 5 per cent., into the same portion of a muscle of a rabbit, a fluid impregnate with *Staphylococcus pyogenes aureus* was injected into the same place. The muscle was found disintegrated, but there was no pus. After the injection of a few centimetres of a 5 per cent. solution of nitrate of silver into a dog, an abscess was formed containing pus, from which no bacteria could be obtained. Of solutions not germicidal, but able to arrest the development of bacteria, acids and alkalies produced no suppuration, even after the addition of bacteria, though 5 per cent. solutions of the caustic alkalies reduced the tissues to a soft hæmorrhagic mass. Injections of 1 to 4 solutions of ammonia caused the formation of pus, cultivations of which in agar-agar remained sterile. When bacteria were injected with it, flourishing colonies of the same form of bacteria as those injected could be cultivated from the pus. Hence they conclude that ammonia, in sufficient concentration to cause severe inflammation and suppuration, furnishes in the subcutaneous tissues a suitable material for the growth of bacteria. Oil of turpentine they determine to be a germicide of the first rank. Instruments immersed in it for two minutes are, they maintain, absolutely aseptic, and are not injured as by solutions of bichloride of mercury and carbolic acid. Injections of this oil failed to produce suppuration in rabbits and guinea-pigs, but in dogs abscesses were formed which contained a peculiar pus with no bacteria. Small amounts of croton-oil produced fibrinous exudations, but no pus; larger quantities caused poisoning. These observations show that certain chemical substances, in the right quantity and strength, can, without bacteria, produce suppuration in certain classes of animals, or may render the tissues suitable for the growth of bacteria which, injected alone into the normal subcutaneous tissue, cannot, unaided, cause a suppurative inflammation.

A Method of Excising the Tongue.—In a clinical lecture Mr. Richard Barnwell describes the following method: Strictly in and along the middle line an opening is made about one-third of an inch long immediately in front of the hyoid bone, through the raphé of the mylo-hyoid. The genio-hyoid and genio-hyoglossus muscles are separated with the handle of the scapula until the deep surface of the mucous membrane forming the floor of the mouth is reached. By means of Liston's needles carried under this membrane to, or even beyond, the last molar teeth, threads are passed on each side into the buccal cavity, which in their turn draw flexible wire-twist,[1] first into, then out of, the mouth, in such wise as to surround the base of the tongue as far back as one will. An écraseur working with this wire severs that part of the organ. Then the loop of another écraseur is passed between the teeth, pressed well down on the first incision, and divides the structures beneath the tongue.

The advantages are the bloodlessness of the operation, its great security against septic pneumonia, and the painlessness of the stump. The first of these is, I conceive, a very great gain. Three or four drops of blood come from the skin of the supra-hyoid wound, and only enough should be produced from the tongue to stain slightly the saliva. It is, however, right that I should tell you of an objection that has been urged against this procedure—viz.,

[1] See my paper in the Clinical Society's Transactions, vol. xiv., p. 147.

that if in the first section by the écraseur any considerable hæmorrhage should occur, the bleeding vessel would be inaccessible, the tongue being yet in the mouth. The matter, however, lies entirely in the hands of the surgeon, for the fact is that unless the écraseur be worked with culpable rapidity there is never any bleeding worth mentioning, since no large vessels are here divided. Moreover, the tightening of the écraseur wire produces that very compression of the base of the tongue which Mr. Heath has shown can be effected by two fingers introduced into the pharynx, and which he points out will check hæmorrhage. I have operated by Whitehead's and by Baker's method, and have more often seen those operations performed. One of my objections to both is that an unnecessary amount of blood is lost. The former method especially requires a particularly good light, and a patient quite under anæsthesia, and able to open widely the jaws—a condition not by any means always present. Moreover, neither of these operations provides for draining the cavity; therefore foul saliva and pus accumulate at its back and in the fauces, is even apt to dribble down the larynx, and at least infects the passage through which the breath passes to the lungs. In my operation the supra-hyoid wound forms, if the patient's head be slightly raised, the funnel-like bottom to a cavity perfectly drained through that opening. I have never found it followed by septic pneumonia, and am glad to hear my patients complain, as they always do, that the mouth is dry. It has also been urged that this method does not provide for excising diseased glands. Well, that is true both of this and of the other two procedures I have mentioned. Superficial glands must be removed separately; the only plan which is adapted for the removal of the tongue and of deep glands is Kocher's exceedingly severe operation.

And now about the painless condition of the stump. The chief, if not the entire, tactile sensibility of the tongue is derived from the gustatory branch of the fifth, for this sense in the glosso-pharyngeal twig is very dull and obscure. The lingual gustatory reaches the tongue by passing down on the ramus of the lower jaw, and division of it in that part of its passage is a device for rendering the organ insensitive. Now the first cut of my écraseur divides these nerves from the point where they leave the jaw, or more often the wire does not cut them, but isolates them, leaving them as branched white threads loose in the mouth, in which case they are to be snipped off with scissors close to the bone; either way the stump has no sensory nerve, and thus is painless, to the great comfort of the patient.—*Lancet*, Dec. 31, 1887.

USES OF CANNABIS INDICA.—SURGEON-MAJOR J. F. P. MCCONNELL, of the Bengal Service, in an article on this subject in *The Practitioner*, of February, 1888, speaks of some uses of cannabis indica that do not seem to be generally known. One of the conditions in which the drug has proved useful in his hands is *anorexia*—loss of appetite consequent upon exhausting diseases, such as prolonged fevers, diarrhœa, dysentery, phthisis, etc. There is a repugnance to and intolerance of food in almost every form, which do not always yield to acids, bitters, and nux vomica as usually given. In these cases cannabis in small doses—℥ v–x of the *tincture*, or gr. ¼–½ of the *extract*—has been found very useful. The tincture may be given in emulsion, with a small quantity of mucilage and simple syrup, and flavored with rose-water. The extract may be given in lozenge or bon-bon form, after being rubbed up with white sugar, gum acacia, etc., to proper consistency. The mixture or lozenge may be given three times a day, half an hour before meals.

Another condition is *dyspeptic diarrhœa*, and the diarrhœa that is associated with defective action of the liver and deficient secretion of bile, and that tends to diarrhœa alba (tropical diarrhœa, in which there is a tendency to action of the bowels soon after meals, and a consequent hurrying of imperfectly digested food through the bowels. In the earlier stages of this disease cannabis is often of great service in controlling the diarrhœa. Even in more advanced stages of tropical diarrhœa cannabis is sometimes useful. The disease seems to be one primarily and essentially of the liver, and cholagogue remedies must be used. Of these mercury is most reliable—as blue pill or gray powder. The mercury is given at night, and the cannabis during the day. Begin with ℥ x of the tincture, and gradually increase the dose to ℥ xv, xx, or xxx, three times a day or oftener. A suitable combination is:

Tincture cannabis indica	℥ x–xx.
Subnitrate bismuth	gr. x.
Mucilage of acacia	ʒss.
Comp. spts. chloroform	℥ xx.
Cinnamon or peppermint water	ʒj.
	℥.

Give before or after food, preferably after, especially when the dose is increased, since in this way unpleasant symptoms are obviated.

Both in tropical and in dyspeptic diarrhœa cannabis is better than opium because it in no way interferes with the bile-forming function of the liver. But when tropical diarrhœa has gone so far that the functional disorder of the liver is succeeded by organic changes, cannabis is useless.

A third condition in which cannabis is useful is in cases of chronic cardiac disease, and in chronic Bright's disease as a *hypnotic*. In cases of distressful insomnia and general inquietude, with an enfeebled heart, in which chloral seems inadmissible, the administration at bedtime of ℥ xv–xx of tincture of cannabis, with a small dose of chloral (gr. x) and ʒss of bromide, will often give the desired effect.

NASAL INTUBATION.—DR. D. H. GOODWILLIE, in a paper read before the Section in Laryngology and Rhinology of the New York Academy of Medicine, December 27, 1887, described a method of nasal intubation as a valuable aid in the treatment of intranasal disease.

My first efforts began by the use of pure rubber-gum tubing of different sizes and strength and made applicable to each case by such impromptu means as

I had at command. These experiments, after being carried on for some time, were so encouraging that I had the tubes made in soft rubber and platinum or aluminium from models that have proved by experience to be of practical application. These improved tubes properly made have given me good results.

These tubes are oval in shape and of the same size, with the exception of the anterior end, that is shaped so as to fit the vestibule of the nostril, and by that they are retained in place. They are made of different sizes, one-fourth to one-half inch in diameter, and in length from two and one-half to three and one-half inches, but may readily be cut to any desired length. The metal tubes can be changed in their caliber by passing through them a core of the desired shape. The anterior end may be soft rubber, as it is more comfortable by its flexibility in the vestibule of the nose. The small rubber tubes are made use of at the beginning of the treatment and changed to larger ones until there is normal space or the deformity has been corrected. Then the metal tubes may be used if so desired, as they allow freer respiration through them. The tube is put into the nostril by raising the end of the nose and gently passing it into the inferior meatus, then releasing the end of the nose and passing the anterior end into the vestibule. They can not be seen externally, and so can be worn and treatment carried on without any unsightly appearance, or even knowledge of their presence. They can be readily removed by the patient for cleansing and returned to the nostril. Some of my patients have worn them constantly for months without discomfort and always with benefit.

I will simply refer to some of the nasal diseases in which they have been made use of—viz.:

1. Intranasal hæmorrhage.
2. Fractures of the nose, internal and external.
3. Deviations of the cartilaginous and bony septum after the necessary surgical operation of section or removal of exostosis.
4. After the removal of hypertrophic turbinated tissues or polypi, whether by the cautery or snare.
5. Hypertrophies of the soft tissues without an operation, when worn for a sufficient time to produce absorption.—*N. Y. Medical Journal*, February 4, 1888.

Treatment of Carotid Hæmorrhage.—In a short article on this subject, in which he reports 4 cases, Mr. Frederick Treves says:

In the neck, pressure upon the carotid artery cannot be applied with success, or maintained for a serviceable length of time. The vessel can, however, be very readily occluded for a while and the carotid circulation arrested without the artery being permanently closed. This is effected by exposing the artery in the usual way and passing around it a thick piece of soft catgut. This is tied in a very loose loop. By pulling upon the loop the circulation through the vessel is at once arrested, but is, however, at once restored when the tension upon the loop is relaxed.

The following case, in which the method was used, is especially interesting:

A builder, æt. 41 years, a man in excellent health, met with the following accident. On Dec. 7, 1885, he fell from the scaffolding of a house in process of erection, a height of 26 feet. He alighted upon the iron railings around the house; the points of these railings were in the shape of spear heads, and one of them penetrated his skull. The point entered just in front of the left ear, and, passing through the maxillary bones, emerged through the hard palate of the right side, and, entering the mouth, broke one of the right upper molar teeth. The railing, having impaled the skull in this way, snapped off short, and the patient fell on the pavement with this enormous foreign body in his head. The piece of iron actually within the head measured five inches and a half in length, two inches and three quarters in breadth, and from half to three quarters of an inch in thickness. There was very free bleeding after the iron was removed, blood welling up from the wound and running from the nose and mouth. No pulse could be felt in the left temporal artery, and it would seem pretty certain that the external carotid artery had been torn across. I at once put a catgut loop around the common carotid; and the bleeding was stayed when the loop was drawn upon. No bleeding of any moment occurred after the first twenty-four hours. On the fourth day a weak pulse could be felt in the left temporal. On the seventh day the catgut loop was removed. The carotid wound healed without complication. The man did well, and was able to leave the hospital some six weeks after the accident.—*Lancet*, January 21, 1888.

Successful Excision of a Tumor of the Spinal Cord.—Surgery is a science, or perhaps we should say a fine art, which will tolerate no limits to its domain. It has of late taken up the invasion of the brain in earnest; it has just made its first successful dash at a tumor in the spinal cord. Last Tuesday evening, before the meeting of the Medical and Chirurgical Society, a private patient of Dr. Gowers and Mr. Victor Horsley very generously allowed the Fellows and visitors of that Society the opportunity of seeing all that had been done for the improvement of his condition. He had spent about three years in severe pain, which was most intense just below and inside the angle of the left scapula, and was accompanied by absolute loss of motion and sensation of the body and limbs below that level. The upper border of the anæsthesia was distinctly in the region of the fifth intercostal nerve on the left side, on the right it was less accurately defined, but did not extend higher. All the symptoms agreed with those of tumors of the spinal cord, and the intense pain afforded ample justification for making an attempt to excise the tumor. Mr. Victor Horsley accordingly removed the spines and parts of the laminæ of the fifth and fourth dorsal vertebræ; but not until the third vertebra had been similarly treated did the tumor come into sight. It was a small oval myxoma compressing and making a deep impression on the left side of the spinal cord below the third vertebra. It was easily shelled out, and under careful antiseptic treatment the temperature

did not rise more than 1° F. The wound healed rapidly, except at the uppermost point, where a drain had been left in by which a little cerebro-spinal fluid flowed away very slowly. For three or four weeks the former acute pain did not lessen, and even at times seemed more agonizing; but after that it gradually and intermittently decreased, and now, after seven months, is entirely gone; the sensation and motion of the body and legs are almost completely restored. This is, we believe, the first time that such an operation has been attempted, and we must, most heartily congratulate both the patient and his advisers on the triumphant character of its success. However far, and however quickly surgery may advance, it will long be a memorable day when it gained its first victory on so new a field and over so formidable an enemy.—*British Medical Journal*, Jan. 28, 1888.

RECTAL FEEDING.—From a study of the subject of rectal alimentation, DR. WEAVER (*Transactions of the Luzerne County Medical Society*) has formulated the following conclusions:

1. By the use of enemata life can be sustained indefinitely with little, if any, loss of weight to the body.

2. In a large proportion of cases in which rectal aliment is used, true digestion of albuminous, saccharine, and fatty food takes place, by virtue of inhaustion, or a reversal of the normal peristalsis of the alimentary tract.

3. While this is the case, there are doubtless instances in which retrostalsis does not occur, and for that reason the food used should first be artificially digested before being injected into the rectum.

4. While milk, eggs, and brandy are the best aliment for rectal nutrition, no one article should be used for too long a time, but frequent changes should be made, observing the greatest care to prevent irritation of the rectum, or intolerance of that organ for the nutriment required.

5. The enemata should, if possible, be administered by the physician himself. Where difficulty in retaining the aliment is encountered, the colonic method is preferable, the food being propelled through a rectal bougie. The food should be of the temperature of the body.

7. The rectum having once become intolerant of enemata, *absolute rest* must be given to that viscus for a few days, and reliance be placed on nutritious inunctions of the surface of the body.

7. For rectal alimentation there exists a wider range of usefulness than has heretofore been assigned to it. It is not only appropriate in the severer forms of chronic disease of the stomach and œsophagus, but is indicated and should be utilized in the management of all *acute* diseases when, from any cause, the stomach become intractable and rebellious.

8. In diseases of the stomach, even where a portion of the food ingested is retained by that organ, only to undergo fermentation, inducing thereby pain and distress, it is more logical to resort to rectal alimentation, not as an *adjunct* to, but a *substitute* for stomachal ingestion.

9. Certain organic lesions as well as functional disturbances of the stomach are curable by means of rest to that organ, and by no other means. In rectal alimentation we have a safe and sure means of nutrition, pending the necessary period of rest to that organ.—*Dietetic Gazette*, January, 1888.

COLCHICUM IN THE URIC ACID DIATHESIS.—In an address on the *Therapeutics of the Uric Acid Diathesis* DR. I. BURNEY YEO says that Dr. Bartholow's description of the effects and uses of colchicum is so complete that he has little to add to it.

"The prejudice against colchicum has induced Ebstein to make the extraordinary statement that it is preferable to relieve the pain of the gouty paroxysm by hypodermic injections of morphine. He says they act "quicker, more easily, and with less danger." I join issue with him utterly. The internal use of opiates in gout I consider, except under exceptional circumstances, indefensible. In a disease of defective elimination, you would be giving a drug which depresses in a remarkable manner the function of all the excretory organs but the skin. A very small dose of morphine will, especially in the gouty constitution produce clay-colored alvine evacuations, sometimes for days.

Colchicum then, I maintain, is one of the most valuable remedies, when judiciously given, for most of the morbid manifestations of this "uric acid diathesis," and so far from being a dangerous vascular depressent, I have shown, in my hospital practice during the session just passed, that in a case of chronic gout with subacute exacerbations, moderate doses of colchicum restored regularity and strength to an irregular and feeble pulse. I trust, then, that the absurd prejudice against this most valuable remedy which has been excited in the minds of the public will be removed, for I find many gouty persons who, much to their own disadvantage, positively refuse to to take colchicum, because they have been told it is, "such a dangerous drug."—*British Medical Journal*, Jan. 14, 1888.

MECHANICAL TREATMENT OF SYPHILITIC ICHTHYOSIS.—The syphilitic affection of the tongue and mouth known as keratosis or ichthyosis linguæ, or as leukoplakia specifica, which is due to unequal development of epithelium over different papillæ, and which is by no means a very easy affection to treat successfully, caustic, astringent and disinfecting applications having but very little effect upon it, is, according to DR. HOROVITZ, best managed by mechanical scraping. He uses a sharp spoon with which he removes the thickened epithelium; in order to accomplish this several sittings may be required. He scrapes away the indurated tissue until the surface presents the appearance of a multitude of minute bleeding points showing that the vascular loops in the papillæ of the dermis have been reached. Iodoglycerine, glycerine of borax, or a 10 per cent. solution of sulphate of copper is applied to the raw surface. The pain is usually not severe, but in the case of sensitive persons cocaine can be used.—*Lancet*, Jan. 7, 1888.

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NEW YORK STATE PROVISION FOR THE INSANE.

The State Charities Aid Association of New York has recently done a very good work by the preparation of a bill, for introduction into the Legislature, that provides for the gradual transfer of the insane, both acute and chronic cases, from county and city poorhouses into the care of the State. Its prominent features are as follows:

1. The districting of the State into as many asylum districts as there are State Hospitals for the insane.

2. The reception by the State Hospitals of all the pauper insane from all the poorhouses of the districts to which the State Hospital belongs, at a uniform weekly rate *per capita*, charged to the counties, for each pauper insane person so received, whether an acute or chronic case, of $1.50. This payment includes clothing and travelling expenses, and the sending of a trained attendant to accompany the patient to the hospital. All cost of care and maintenance exceeding this rate is to be paid for by the State at large.

3. The erection on the grounds of the existing State Hospitals of a number of inexpensive detached buildings, sufficient to provide suitable accommodations for the chronic pauper insane now in the poorhouses of the State, at a cost not to exceed $250 *per capita*. These buildings to be erected, if possible, within one year after the appropriation is made.

The elastic nature of the proposed measure, by which present and future needs are provided for, as regards overcrowding, size of buildings, etc., is an important feature, and it is to be hoped that this act will be passed, as it is beyond question that the insane can be cared for much more satisfactorily in every way by the State than by the counties individually; the State hospitals representing to-day the very best standard of treatment that has been reached in this country. In addition, it is highly desirable that the measure should be adopted at this time, for a movement is on foot, backed, it is said, by certain local political influences, to secure special legislation by which a number of the counties in the State shall be empowered to take care of their own insane in county asylums.

At the recent meeting of the Medical Society of the State of New York, the President, Dr. Alfred L. Loomis, referred to this matter in his address. He contended that experience universally condemned the advisability of such county asylums, and recommended that the Society should take action upon the subject. The special committee appointed in accordance with the suggestion made in the address, consisted of Drs. A. Jacobi and C. R. Agnew, and they prepared the following very admirable report:

1. That until comparatively recent times the insane were considered and treated as criminals and confined in dungeons or prisons.

2. Their subsequent retention in poorhouses was but a remnant and mitigation of the old system.

3. The treatment of the insane has improved with the progress of civilization.

4. Therefore special hospitals were supplied for them, and their welfare was entrusted to scientific and humane experts.

5. To return to anything like the old system of treating the insane in poorhouses or relegating them to the custody of county officials, would be a grave mistake. As early as 1855, at a meeting of the County Superintendents of the Poor, held at Utica, the following, among other resolutions, was passed:

"*Resolved*, That no insane person should be treated, or in any way taken care of in any county poor or alms house, or other receptacle provided for and in which paupers are maintained and supported." (55th Annual Report, State Asylum, at Utica.)

6. For the proper classification and treatment of the insane more means are required than for the patients of general or even other special hospitals. Institutions for the insane, therefore, demand medical experts as superintendents, nurses trained in the general care of the sick and then in the special care of the insane, schools for the physical and intellectual training of the insane, for the practice of out-door and in-door industries, and many other appliances.

7. The Medical Society of the State of New York expresses, therefore, its objections to any plan or

law which in any way looks to the return of the insane to the county poorhouses as being unscientific and inhumane, and expresses its convictions that those institutions, like the State Asylum, which have Boards of Managers accountable to the State Government, and also to the public, are best adapted for the care of the insane poor of the State.

This report was adopted by the Society, and also the following resolution:

Resolved, That the above report on the treatment of the insane be sent to the Committee on Legislation of the Medical Society of the State of New York, with instructions to use it in its discretion, in the Legislature and elsewhere, to further the objects in view.

In the discussion upon the resolution the following extract from a letter of Dr. Jos. M. Cleveland, Medical Superintendent, Hudson River State Hospital, Poughkeepsie, N. Y., to Amasa J. Parker, Jr., President of the Board of Managers of the Hospital, was read as illustrating the progress that is being made in the scientific nursing of the insane; a kind of progress not likely to reach the insane if shut up in poorhouses.

"Next month, (March, 1888,) we graduate four young women from our Nurse's Training School. All four before coming here had graduated from a General Hospital Training School. They will have been with us one year in March. They have been very thoroughly instructed in mental nursing by lectures, class instructions, quizzes and clinical teaching. They are bright, intelligent and full of ambition to become thoroughly equipped in all that pertains to a high order of nursing."

THE VALUE OF IODOFORM IN SURGERY.

The year 1887 was prolific of iodoform literature, probably the more so because of the paper of Heyn and Rovsing, of Copenhagen, that appeared early in the year, and in which the surgical value of iodoform was denied. The latest contributions to the subject are the papers of A. Kunz (Ueber die Wirkung des Iodoforms auf Infectionsorganismen, in Ziegler and Nauwerck's *Beiträge zur pathologischen Anatomie und Physiologie*, Bd. ii, Hft. 2, Sänger (Ueber die Einwirkung des Iodoforms auf das Wachsthum und die Virulenz der Milzbrand-bacillen, *Deutsche medicinische Wochenschrift*, No. 33, 1887), and Jeffries, of Boston (Anti-bacterial Action of Iodoform, *American Journal of the Medical Sciences*, January, 1888).

The papers of Kunz and Jeffries contain reviews of the literatnre of the subject, as well as the details of a number of bacteriological experiments. They are also interesting, as showing how bacteriological work is to be done, how evidence is to be weighed in this kind of work, and how clinical deductions are to be made. Jeffries asserts that the experiments of Heyn and Rovsing were free from errors of method, and were made in accordance with accepted rules. In fact, the objections made to the experiments were, that laboratory tests are no evidence of what occurs in the body; that in these tests no iodine, by virtue of which iodoform acts, was set free. "Strangely enough," says Jeffries, "none have pointed out that the experiments only disprove a germicidal action, but do not exclude an inhibitory action on their growth. The injurious effects of crowding are so great, in solid cultures, as soon to cover up any slight inhibitory action of the iodoform." The two most important points in Sänger's paper are: that the presence of non-growing anthrax bacilli causes gelatine tubes to dissolve; and that iodoform limits the growth of the anthrax bacillus, and prevents its taking in a re-inoculation.

Until Kunz and Jeffries entered the field the whole question of the value of iodoform was involved in a mist. The early writers noted that the drug had a distinct action on putrefaction, but the more recent writers failed to observe any action on pus-producing bacteria; while the majority of clinicians were decidedly in favor of the drug. The conclusions of Kunz and Jeffries should have a direct tendency to settle the vexed question. It is evident that clinical experience and laboratory experiments should lead to the same conclusions, else one or both must be wrong. After his numerous experiments and somewhat exhaustive review of the literature of the subject, Kunz contents himself with the conclusions *that iodoform will prevent septic intoxication, but not septic infection.* The conclusions of Jeffries are of more practical value to the surgeon, for the reason that they tell more:

1. Iodoform not being a germicide is not a fit substance to use to procure asepsis of instruments, materials, or wounds.

2. Iodoform is allowable, with the present state of our pharmacopœia, in infected wounds where the true germicides are contraindicated, as by danger of poisoning or impracticability.

3. As has long been known, iodoform has a decided tendency to stop serous oozing, and, therefore, may be indicated in wounds where the moisture threatens the integrity of the aseptic or antiseptic dressing.

THE MEDICAL DIVISION OF THE PENSION BUREAU.

Bills have been introduced in the House of Representatives at Washington, proposing to increase the efficiency of the Pension Bureau by adding one surgeon and six medical examiners to the present force. This would make the medical staff of the Pension Office consist of one medical referee, one assistant medical referee, three surgeons and twenty-four medical examiners, which would certainly seem to be as small a medical corps as could be reasonably expected to properly examine and supervise the immense number of pension applications that reach the Pension Bureau of this nation in these days. The bills also propose to increase the salary of the medical referee to $4,000 per annum; that of the assistant medical referee to $3,600; that of the three surgeons to $3,000; and that of the medical examiners to $2,500. These propositions, both to increase the number of members of the medical staff of the Pension Bureau, and to increase their salaries, should be adopted without opposition from any one, for the proper discharge of the duties required demands thoroughly qualified medical men, and such cannot certainly afford to accept those positions for less pay.

SOCIETY PROCEEDINGS.

SUFFOLK DISTRICT MEDICAL SOCIETY.

Stated Meeting, January 11, 1888.

SECTION FOR CLINICAL MEDICINE, PATHOLOGY AND HYGIENE.

THE PRESIDENT IN THE CHAIR.

DR. W. N. BULLARD read a paper on

A CASE OF CEREBRAL LOCALIZATION WITH DOUBLE TREPHINING.

(See page 228).

DR. J. J. PUTNAM said: Cases of brain operation are rare, and we should learn from them all we possibly can. Although as Dr. Bullard has said, we can through our knowledge of certain portions of the brain, localize with considerable accuracy certain lesions, especially those involving the motor functions, it is, on the other hand, I think, very difficult to tell what the nature of the lesion is, and the exact relation of the disease to the symptoms. The difficulty of determining at what depth a tumor lies, the fact that tumors which grow very slowly so often occur almost without symptoms, and our ignorance of many of the conditions that govern the occurrence of symptoms, would seem, I think, to make us very properly cautious in raising any very sanguine expectations about the result in most cases. And although the case before us is highly interesting and justified, Dr. Bullard's claim in regard to it, that the diagnosis as to the lesion was made during life, it cannot count as one where much benefit could have been hoped for. In these congenital troubles, I don't see how we can expect to produce a result that would be particularly favorable unless we can operate upon them very early. And then the trouble comes in that the difficulties of early localization are greater than at a later time. The rapidly developing brain of the child is so susceptible to permanent injury; its growth is likely to be retarded; and an atrophy involving not only the seat of the lesion, but that of the whole hemisphere of the brain is liable to follow from any injury received at birth, or in the very early years of life. Moreover, the fact that localized lesions, even if they might have been removed soon after they occurred, give rise to secondary changes not only in the hemispheres of the brain, but in the deeper lying tracts, would, it seems to me, render this class of cases not a favorable one for operations of this kind.

In regard to the operation itself, of course the points are many and interesting, and I would not attempt to touch upon them at any length. One remark made in connection with a case operated upon in New York struck me as significant. It is important that the opening in the skull should be large; that quite a window should be cut, instead of the ordinary trephine hole, the belief being that under those circumstances the brain is less liable to protrude from the opening, and that the wound is more likely to heal favorably. I recently saw a specimen from a case in New York, which unfortunately terminated unfavorably, where, although no suppuration had taken place and no sign of septic poisoning showed in life, the patient died from what was considered as red softening, immediately beneath the seat of the operation without it being possible to discover any cause for it. The brain simply became softened; that was all one could say about it. It has usually been considered that serious results from operations are not likely to occur. Dr. Spitzka, in experiments on animals, has gone further than that, and says that not only are unfavorable results not likely to occur, but a second operation in the same region is even less likely to do harm.

I cannot help saying a word about a case that I saw myself, which seems at once an illustration of the difficulties in the way of the diagnosis of cerebral tumors, and also of the possibilities of cerebral surgery. It was the case of a woman that exhibited through life no localizing signs except toward the end of her life a slight facial paralysis on one side. Beyond that she had an intense headache, and a progressive stupor. She died, and at the autopsy a large sarcomatous tumor was found pressing apart the sides of the fissure of Sylvius, having caused no real injury beyond the pressure, to the brain itself, and being attached to the dura mater on the sphenoid bone with very slight attachments. If the tumor could have been reached it certainly could have been removed without injury, I think. On the other hand, it had grown to the size of one-half or

two-thirds of one's fist, without it being possible to diagnose it as central or cortical.

DR. MORTON PRINCE said: In regard to the possibilities of the operation, I feel like being a little cautious; as if we must not go ahead too fast. We don't yet quite know what the possibilities of brain surgery are. There are certain fixed principles upon which, in the light of our present knowledge, brain surgery must be based. These are that an operation should be undertaken only for the removal of a lesion causing symptoms of irritation, or threatening the life of the patient. All operations thus far have been based upon this principal. A brief survey of these cases will make this clear. Up to this time they have been reported only fifteen cases of pure brain surgery. Of these, eight were cases of tumor, of which only three survived the operation, and of these three one died later from recurrence of the tumor. In the remaining seven cases, the operation was undertaken for the removal of a supposed lesion causing epileptic fits; in these seven cases there was recovery from the operation itself. It is interesting to note that the operator in these latter cases as well as in the successful cases of tumor was Victor Horsley, who is the only operator, I believe in whose hands the operation has not ended fatally. He has operated nine times with only two deaths. In one of his cases only was death the immediate result of the operation, and in this case it should be said that the patient was in a very critical condition when the operation was undertaken. The second death (the one just referred to) was due to recurrence of the tumor. In the seven cases operated upon for epilepsy due to irritative lesion, there was complete and permanent cessation of the fits in four cases, and more or less improvement in three. In this latter class of cases the operation was undertaken with the idea as of removing the diseased tissue which was regarded the point of irritation and the exciting cause of the fits. Now it will be seen that the principle underlying all these operations was that there was a lesion of the brain, causing not merely paralysis and loss of function, but aggravating irritative symptoms, or else threatening life. In one case the fits aggregated three thousand in two weeks. To operate upon the brain in such cases as these I believe to be sound surgery and sound neurology, and there seems to be a legitimate, even if limited field in this direction, and perhaps a brilliant future. Time, however, can only settle this. But when we go from this to cases of paralysis, and that too with spastic symptoms, I confess I feel very doubtful. I am unable to see on what sound principle of neurology, operation in such cases can be based. I am unable to understand how a pure paralysis due to a hole in the brain is going to be improved by making the hole bigger. All that we could do by operation would be to cut out more brain, and that is equivalent to enlarging the lesion, and would simply increase the extent of paralysis. Furthermore, when spastic symptoms of long standing exist, as in the case reported, there undoubtedly exists secondary degeneration extending down along the direct fibres through the motor tract to the cord, and it is to this secondary degeneration that the spastic condition is due. Mere removal of the cortex could not then in any way relieve these symptoms.

There is one point of which the reader spoke and which I think should be emphasized still more, and that is the necessity, if you are going to operate, of taking into account only the symptoms themselves in localizing the lesion. That is, the proper localization depends entirely upon the grouping of symptoms, and it is only by such grouping that we can localize the disease. It makes no difference where the original injury to the skull is situated, and this should not be considered. This seems a trite remark, and yet I think it not uncalled for. I remember seeing a case the other day, a case of aphasia, where the trephining was done on the top of the head, attention being directed to that spot on account of a former accident. Of course the lesion must have been lower down.

Perhaps there is another class of cases where there is a possible field for this operation, and that is where, in cases of this kind, there is not only paralysis of one or more members, but where there is also athetosis or clonic localized spasms of severe type. I saw a case of this kind some time ago. I suggusted the operation, but did not see the patient again. I think perhaps in that case something might have been done. I do not say this to criticise the paper, for I think the reader should be highly gratified at his success in localization in this case.

DR. J. COLLINS WARREN: I have very little to say, but have studied this matter up a little. I was struck by what was said about the caution with which we should go ahead in this region of surgery. I think that corresponds pretty well with the writers on this subject, especially in works on surgery. They say that the study of the cerebral topography, and the physiological action of these centres indicates rather what not to do than what to do. That is to say, the opportunities for interfering and trephining are comparatively few as compared with the indications when we should abstain, and yet many of these indications might tempt one, ignorant of cerebral topography, to interfere and relieve pressure or something else there. For instance, if we have injury with symptoms of paralysis, which correspond to that tract, not too extensive, that might perhaps be a reason for interference. If, for instance, after a blow, we have paralysis of the arm and leg, that might be an indication for trephining at the upper portion of the fissure of Rolando. But if we have total anæsthesia, not only is the motor tract involved, but an indefinite amount of brain convolution behind the ascending parietal. That is, it is an unknown quantity, a considerable surface, so that in order to reach that surface we would have to put on four or five trephines side by side, in order to uncover it and relieve it. There it would be contraindicated. Limited paralysis or anæsthesias, with well-defined injuries, give the indications for interference in a surgical case.

From the surgeon's point of view there is one other indication for interference, and that is in hæmorrhages from fracture. In a diagram in which the

middle meningeal artery is represented, we can see how, by measuring back from the external angular process three and one-half centimetres, we can strike the exact point crossing the middle meningeal artery, and if we were to have symptoms of pressure in that part of the brain substance, for instance, of facial paralysis, we could readily interfere, and trephine at that point, and get at the artery comparatively near its origin. If we found that there was any difficulty at that point, but it appeared that there had been a hæmorrhage from the artery, the indications are to put the trephine on the same horizontal line but more posteriorly, because the blood-clot may be in the posterior part of the brain rather than the anterior, in some cases. The reported cases are, I think, a considerable number, although I cannot quote them.

Dr. Prince spoke as if trephining for epilepsy were comparatively a novelty. I think that it is an operation that has been done considerably, although perhaps done in a different way, such as trephining for simple and depressed fractures, I would like to ask if there is any special localization, other than the determination of the seat of the depressed fracture?

Dr. Prince: I referred to a different form of operation. Not merely trephining, but removing a portion of the brain, even when there is no reason to suppose that there is a gross lesion. Hughlings Jackson has suggested that in cases of epilepsy and epileptiform convulsions, where you are able to trace the beginning of the convulsion to a focal point in the cortex, it would be justifiable to remove that centre as the focus of the epileptic discharge. For example, suppose the convulsion always to begin in the thumb, and to progress in a definite order throughout the body, in that case the centre for the thumb will be found to be the seat of the most intense discharge, and he considers it good neurology and surgery to remove this centre. Acting upon that advice, Dr. Horsley, in one of his cases, did remove the centre for the thumb, with the result that he cured the fits. It is in that sense that I speak of brain surgery as being a novelty, and it is in this field that perhaps there is a considerable opening for the future.

Dr. S. H. Weeks, of Portland, said:

If I may judge from my own experience and observation, the operation of trephining the skull is not attended with as much danger as is supposed. I recall a case (and I wish I could detail it more accurately than I am able to), that I operated upon at the Maine General Hospital some year or eighteen months ago, in a young man who was having epileptic fits every week, and sometimes twice a week, following an injury which he received when a lad, some fourteen or fifteen years ago. He was riding a horse for raking hay, and was suddenly thrown from the horse, and as the rake revolved one of the teeth, made of steel, struck his head near the bregma and I think a little to the right of the median line. At the time there was a compound comminuted fracture with depression. The physicians at the time removed some portions of the skull. The wound healed, leaving a cicatrix, and in the course of a year or two there commenced convulsions, first in one hand, and I am sorry that I am not able to say which, but I hope some time to report the case, that you may have the exact measurements and symptoms, and derive more advantage than from any recital here now. I am sure that the convulsions first started in the hand, and then extended into the arm, and then involved the entire side. He had been at the hospital once before, and after consultation we refused to operate. He went home and suffered another year, and his convulsions becoming very frequent, he again returned, and said: "If there is anything that you can do, I want it done, no matter what the risks or dangers are." At the second consultation we decided to operate. I repeat this more to show the safety of the operation than anything else. Making an incision through the skin, I found that there was a portion of the skull that had not been restored, and here the scalp and dura mater were adherent. I dissected off the scalp from the dura mater, directing my dissection as well as I could so as not to open into the cavity of the arachnoid, and came to the edge of the bone, which seemed to be indented, and then took out a section of bone. Not finding a depression there, I felt that I had not reached the difficulty, and took out another portion, and upon that button there was an exostosis from the inner surface to the extent of three or four lines, extending down on to the dura mater and firmly adherent to it. After I had loosened the segment of bone, finding this projection adherent, I was obliged to take out an elliptical portion of the dura mater in order to remove the bone. I brought the edges of the dura mater together with small catgut suture, and then closed the external wound, applied a simple dressing, and put the patient to bed.

There were almost no unpleasant symptoms following. In fact, so comfortable was he after the operation, that he would sit up in bed in spite of my cautions, and declared that the only thing that he was kept in the hospital for was to let his hair grow again. I believe the danger in trephining is not as great as we have supposed. And while there are many diseases that we may not be able to cure by brain surgery, yet I believe there are many cases which are capable of cure, or of being benefited by these operations. One word in reference to the future of this patient. While the fits were not cured, they were very much mitigated. I saw him a few weeks ago and inquired particularly for the symptoms, and he said that once a month or so he would have a slight convulsion, but nothing to compare with what they were before; and were it not for his intemperate habits, which he continues, I believe the benefit would be much greater. There are other cases that I think of, but I will not relate them. I thank you for your courtesy and kindness, and shall be very much interested in listening to the further discussion.

Dr. P. C. Knapp said: I have been very much interested in the paper as showing the very exact localization of the lesion. I would agree with Dr. Putnam and Dr. Prince in what they have said. There is one point, however, that seems worthy of notice, and that is the fact that although there was apparently a lesion in the cortex, which is so com-

mon in these cases, there were no convulsions at any time in the history. A year and a half ago Dr. Sachs, of New York, laid special stress upon the presence or absence of convulsions as an important symptom in the localization of the lesion. In cases of intra-cerebral hæmorrhage or embolism, he believed that there were no convulsions, but in cases where there was cortical disease, he believed that convulsions were present.

This case, I think, is of special interest, as showing the presence of probable cortical disease and entire absence of convulsions. I would say, moreover, that as the case was reported, I do not see what justification there was for either operation. Certainly the cicatrix on the right side caused no symptoms, and after so long a duration there was no evidence of any disease there to be operated upon. Nor do I see what could have been gained in any way by operating upon the other side, for the symptoms were those merely of paralysis and secondary degeneration, and no operation whatever could have helped the patient.

I agree with Dr. Prince fully that, in case of convulsions or athetosis, perhaps there might be benefit in removing portions of the brain substance, but certainly there is one point that might have a bearing in such cases. In some cases that I have seen, where the limb was only partially paralyzed, there were athetosis or convulsions starting in the hand. Here, if you were to cut out the centre for the hand, which was the chief seat of the lesion, you would produce absolute paralysis of the hand; this would deprive the child of a fairly useful hand, and would leave him in a less advantageous position for getting through the world than he was in before.

DR. PUTNAM: Of course, in localization we refer chiefly to cortical localization. It seems to me, however, that this case is one where localization of that kind is really not possible. What we had present was a hemiplegia, apart from the secondary changes. The aphasia, I take it, would count for little or nothing, for the child had never spoken. Even if that were not so, the function of speech would be probably sooner lost in a child's brain than in an adult's, so I cannot see how we could strictly localize the lesion. It was evident that it involved structures either so extensive or so far beneath the surface as to include all the tracts coming from the opposite side of the body; that is to say, it must have been a very extensive cortical lesion, and in that case not strictly localizable, or else a moderately deep-seated injury; and I do not see how it would be possible to localize it with certainty in one part rather than another of the motor tract, except that we might perhaps say that it was not in the pons.

DR. KNAPP: I would like to ask Dr. Prince one question: In speaking of Mr. Horsley's removing portions of the cerebral cortex where the convulsions always began in one portion of the body, he said that Hughlings Jackson advised it. I would like to know whether he recalls any case in which Mr. Horsley operated where there was no gross lesion of the brain? It seems to me that in every case he found some thickening of the meninges, or a tumor, or something of the sort. I do not recall any case where there was no disease whatever, where there was simply the functional disease starting at that point.

DR. PRINCE: There were, I think, two cases. In one he removed not only the tumor, but also the thumb-centre. In this case he diagnosed a doubtful lesion. He knew that there was a lesion, but was in doubt as to its exact nature. As I understood the report, when he came to open the skull he found no lesion whatsoever, but he still removed the portion of the brain corresponding to the seat of the epilepsy. At any rate, Jackson advised it, and said that he would advise the operation in the future. It seems to me that this is a sound principle to go upon simply as a theory in a very grave case. Of course you would not operate upon a case of that kind unless it were a case that justified some risk.

DR. KNAPP: I did not know that a case had been reported in which there was no gross lesion.

DR. WEEKS: In speaking of the localization of the different functions of the brain, I recall a case that came under my observation several years ago, where a man who had organic disease of the heart was taken suddenly with aphasia, and the sickness lasted only two or three weeks. His sickness increased day by day, manifesting decidedly cerebral symptoms. The most prominent symptom was the loss of the power of speech. It was at the time when the discussion as to the seat of language was going on in the medical journals and societies, and when the medical opinion was not as well satisfied as now in regard to the localization, and yet my attention had been called to the anterior portion of the left hemisphere, the temporal lobe, as the seat of language, and I watched the case with a good deal of interest. When he died, I was successful enough to get an autopsy and, on taking off the calvarium, I found the dura mater at that point a good deal congested; and on opening through the membrane, and going through a very thin portion of the cortical substance of the brain, I came to a large abscess. Now I believe that to-day, if you had such a case as that, you would operate upon the abscess and give exit to the pus, and in such a case as that I believe you would save the life of the patient. Here was the seat of the lesion, and, so far as any case can prove the theory, certainly this goes to substantiate the theory of the localization of the seat of language.

DR. WALTON: I am quite agreed as to the importance of the surgeon's being prepared for early operative interference in just the cases that are indicated. I do not think, however, that this variety of cerebral surgery, where the healthy skull is trephined without fracture or other injury, has so great a future as, perhaps, was hoped for it at first; certainly no such future as abdominal surgery, for the cases are really limited in which the operation is sufficiently indicated. I agree with Dr. Prince that, as we eliminate the cases, we shall finally become pretty well sifted down to lesions that are irritant, and lesions that bring about decided pressure symptoms, in which we feel pretty certain that we can relieve pressure. I think there are certain localized abscesses which can be operated upon with advantage. All these lesions must be decidedly near or at the cortex, or we are

not justified in operating. The result will be, that there will be so few cases in which we will feel ourselves justified in operating, that opportunities will be rather rare. We have been on the lookout at the Massachusetts General Hospital for an acceptable case, and I fancy it has been true at the other hospitals, and there has not been, so far as I know, any case admitted. The nearest we have come to it was one case in which we did diagnosticate a tumor in the cortex. There was paralysis or partial paralysis and, if I remember rightly, convulsions of one arm, in which we were sure that the tumor was at the cortex, and advised operation, but the patient demurred.

I was interested to hear Dr. Putnam speak of a considerable opening in the skull. I think it is important to make as large an opening as possible, not only for the sake of after-results, as far as the case is surgically concerned, but also for the sake of helping us to localize. My attention was particularly brought to that point by going to the demonstration of Drs. Warren and Richardson, last evening, in which the skull was trephined on the cadaver and the fissure of Rolando found. The fissure was localized according to the regular method, the opening made perhaps three-quarters of an inch in diameter, and directly in the middle of the opening was a fissure, but it seemed to me at almost right angles with the direction one would suppose it to go. But, on removing the calvarium and dura mater, it was afterwards discovered that it was the fissure of Rolando, but it had taken a turn at that point. It is not always so easy, even after the brain is removed, to determine just where the various fissures are, as sometimes those fissures which should be the most distinctly marked are the least so, and other less important fissures become more marked. And in this case I should say that the frontal fissure was much more marked than the fissure of Rolando.

Dr. Bradford: I did not have the pleasure of hearing Dr. Bullard's paper, but he has allowed me to read it, and I think it covers the ground pretty thoroughly. It only remains for me to say what the reasons were for performing the operation. I think some apology should be made for an attempt at an operation on a child who was idiotic. The operation was done in this case chiefly for the reason that it was hoped that the spastic symptoms might be relieved. The parents were told distinctly that it was purely experimental surgery, and they wanted to have the operation done, even on those grounds. Notwithstanding that, in these cases of spastic paralysis, the cortical substance is in a large number of cases involved, it was hoped that possibly some irritative centre might be found, and the removal of that might relieve the spastic paralysis of the leg and arm, and render the locomotion of the child better. The result proved that the operative interference was not justified except as an experiment. The cause of death in this case is, I think, somewhat interesting. The child died, unquestionably, of shock, and the question arises whether the double trephining may not have been more than was proper to have done.

It is a question whether it might not have been better to have trephined in one locality, and waited before trephining in the other. It did not seem so at the time, and the double trephining was undertaken; trephining over the cicatrix to satisfy the parents, who believed that the condition was in some way due to the depression of bone. Both Dr. Bullard and I thought not. That double trephining may have given rise to the shock.

Another cause of death may have been the use of morphia before the operation. The child was given morphia subcutaneously or by the mouth a short time before the operation, carrying out Mr. Horsley's idea for the purpose of contracting the vessels in the brain. I think a larger dose was given than would have been needed; $\frac{1}{12}$ of a grain was given, and I think $\frac{1}{20}$ would have been better. At any rate, during the etherization the child was more or less under the influence of the narcotic. That may have acted injuriously, although the child came out from the ether and morphia before dying.

Another cause which may have given rise to death was bleeding from one of the larger vessels in the diploe during the operation. That was plugged by a piece of wood, but the child lost some blood. I think, so far as we can judge from the single case, it would not be desirable to do a double trephining in a child.

Dr. M. H. Richardson said: It seems to me, as Dr. Walton has said, that the probable future of cerebral surgery does not promise the results that we get in other parts of the body, the peritoneal cavity for instance. My own experience in trephining for the sake of finding an abscess, for removing a possible irritating cause of epilepsy, has been uniformly unsuccessful. I reported two cases a year ago of trephining for epilepsy, and another for cerebral symptoms after compound fracture, without any benefit whatever. And since then I have trephined to evacuate a probable abscess after a gunshot wound; a good case for symptoms arising after injury. In the latter case death followed, and in the first two cases there was no benefit whatever. It seems to me in a certain number of cases, where symptoms of definite localized irritation can be made out, at present it is the duty of the surgeon to interfere on the chance of doing some good. But it seems to me that, as matters now stand, the chances are that in a large number of cases there will be no permanent benefit following the operation.

Dr. Bullard: I agree entirely with Dr. Prince and Dr. Putnam in regard to the fact that we should not be too fast in brain surgery. I think that nobody who has had anything to do with the localization of lesions fails to understand the difficulties and the many problems we have to consider, and the very small number of cases in which we are justified in operating. But it does seem to me that such a class of cases exists, and although the most prominent cases are those where convulsions or irritant symptoms follow, yet we must not limit ourselves to them entirely. Ross says that the larger number of hemiplegic cases and convulsions come on at least by the time the child has reached 8 years, or sometimes a little later. I have not experience enough to know

whether that is true, but it is certainly true that, in a certain number of cases of spastic hemiplegia, the convulsions do come on later. Now I should be very slow to advocate operation in cases of spastic hemiplegia unless there were some special reason for doing so beyond the mere fact of the existence of a hemiplegia; but I believe that there may be certain cases where it would be advisable to perform the operation. In this particular case I think we had good ground for localizing the lesion as we did. Of course I have not gone into all the details. A good many symptoms were absent which would have been likely to be present if the lesion had been in other parts of the brain. Of course, in such a case, the operation is done with the understanding that it can only be experimental.

DR. BRADFORD: The sense of the meeting seems to be in disparagement of cerebral surgery. I don't think we shall put ourselves in the line of modern surgery if we take the ground that cerebral surgery has not a future, and I think we can anticipate a brilliant future for it. We are only in the beginning and I think what has been done shows that there is a great deal more to gain when our experience is greater. I think it is in the recollection of most of us here, that here in Boston the statement was made on the best surgical authority, that ovariotomy was not a justifiable operation. We have lived to see that dictum not accepted, and I think we will find that cerebral surgery has a future before it that we have not yet thought of

DR. GEORGE B. SHATTUCK then reported some cases of *Family Ataxia*.

DR. FRANCIS H. WILLIAMS exhibited the new drug,

AMYLEN-HYDRATE

and he said: This substance may be used a a substitute for chloral. It has a peculiar odor, something like ether, and the taste is camphor-like, with an after-taste of peppermint. It is a clear, limpid liquid, and is fairly soluble in water. It takes about eight parts of water to dissolve one of the drug, and is quite soluble in alcohol. The dose is from half a drachm to a drachm, 3 to 5 c.c. It does not act so strongly as chloral, it is not so powerful a drug, but on the other hand it is free from some of the dangers of chloral. It does not act to depress the heart and respiratory centre as much as chloral does, and for that reason is a safer drug to use. In many cases it seems to work well, in a smaller number it has not been very efficacious. In one case for example, in Dr. Mason's service, 40 minims of the drug were used in a uterine case where the patient had slept very poorly for several nights. She had some pain. One-sixth of a grain of morphia, repeated, was not able to give her the required sleep. This new remedy was given at 10 o'clock. At 10.15 she was asleep, and she slept nearly all night. As a rule the after-effects are not unpleasant. Here and there a few inconveniences are experienced from it. In one or two cases the remark was made that the patient experienced a pleasant sensation for an hour as though drunk, and was somewhat silly. In this case she felt contented, and went to sleep in about an hour. I will not do more than call your attention to the drug and suggest that for certain cases it is likely to be a valuable substitute for chloral, but a better reason for not saying more about it is that perhaps Dr. Mason will be kind enough to tell us something of his experience in using the drug. I have reports of cases in which it has been used in Germany, and in about 80 per cent. of the cases it has proved satisfactory. Unpleasant after-effects have not been noticeable.

DR. A. L. MASON said: I have a brief memorandum of some of the cases, but I will not delay you with it at present except to say that they were all cases of marked insomnia. There were two cases of rheumatic fever, with heart complications, in which we obtained four hours' sleep. In one case of severe measles four nights of uninterrupted sleep were obtained. One restless typhoid patient was not quieted by urethan, chloral, bromides or opium. Drachm doses of amylen-hydrate gave a good night's sleep. A case of acute tonsillitis, sleepless for four nights, and another patient with dyspnœa, slept well after half a drachm. A case of abortion obtained good sleep for five nights.

Another patient who had sleepless nights after urethral caruncles were removed, and a uterine case, in which one-sixth of a grain of morphia, repeated, was of no avail, had a good night's sleep after 40 minims. And the same dose answered the purpose in a case of chronic nephritis with insomnia. A patient with cardiac insomnia, who had been treated with everything else, has had from five to seven hour's sleep after this drug. It effect appears better than that of paraldehyde or urethan. It seems to be free from the disagreeable after-effects of chloral or opium. The sleep usually comes within twenty minutes after it is given. No ill effects were observed. There was mild intoxication in a few instances.

These cases are, of course, too few in number to draw conclusions from them as to the power of this drug. I believe it is not yet in our market and probably Dr. Williams has had the only specimen.

DR. ALBERT N. BLODGETT: If it is in order I would like to say a word for paraldehyde, that has been mentioned in connection with the new drug presented to-night, and which has previous to this seemed to be the drug which has produced better results than any other of that character. Of course, when I say "of that character," I mean a drug which is a simple hypnotic and not a sedative like opium. Paraldehyde has on several occasions, under my observation, produced a sleep which seemed to me more restful than that produced by any other hypnotic except perhaps urethan, and the latter seems to me less efficient, as it soon loses its influence, whereas paraldehyde seemed not to lose its efficiency. What pleased me most was the remarkable absence of after-effects after paraldehyde, which has been mentioned as pertaining also to this new drug. That seems to me to be an important advantage for we don't know how long it may be necessary to use it, and the use of other drugs might not be desirable. The nauseous taste of paraldehyde, and the eructations that rise after its use and the very great difficulty of mingling it pleas-

antly with other substances, are serious objections to its employment.

DR. WILLIAMS: This new drug does not seem to me to be as disagreeable to take as paraldehyde. That is one advantage that it has, and I think it is a rather stronger drug.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

Stated Meeting, Thursday, February 2, 1888.

THE PRESIDENT, T. M. DRYSDALE, M.D., IN THE CHAIR.

DR. B. F. BAER presented the specimen and read the report of a

CASE OF NON-PAPILLARY INTRA-LIGAMENTOUS CYST; ENUCLEATION OF ENTIRE TUMOR IN THE RIGHT BROAD LIGAMENT; OF LINING MEMBRANE ONLY IN THE LEFT.

Sessile tumors, whether cystic or solid, are always more or less dreaded by the operator because of the greater difficulty and danger attending their removal, and also because, in the case of sessile cysts, the results as to the permanent relief of the patient is less certain than where the tumor has a pedicle. Clinically and pathologically, therefore, these cases are of great interest and importance.

Pain and hæmorrhage, are the important subjective symptoms. The former is usually present, sometimes in great severity; the latter is at times alarming in the quantity of blood lost and in the frequency of its recurrence. This is not surprising when we consider the close relation which these tumors sustain to the uterus and to the other pelvic organs and tissues. The wedging and pressure which results from the growth of the tumor in the limited space produce great congestion of the blood-vessels from stasis. The uterus becomes enlarged and softened in consequence and metrorrhagia follows; but the hæmorrhage is conservative to a certain degree in relieving the distended vessels, probably averting rupture of a vein in the broad ligament or in the tumor. The pain which results from the stretching of the nerves involved is also relieved or modified by the depletion following a free hæmorrhage from the womb. But the flow once started does not always remain within the conservative line; it sometimes becomes uncontrollable and results in acute and serious anæmia.

According to Doran, sessile cysts which arise from the hilum of the ovary or from the Wolffian relics in the broad ligament are usually papillomatous; but that non-papillomatous sessile cysts infiltrating the broad ligament are not infrequently met with is shown by the following statement from that author: "In 24 cases where I assisted at the operation, sessile cysts infiltrating the broad ligament were removed, more or less completely, but their origin could not be ascertained; none of these contained glandular growths, most were multilocular, but papillomatous growths did not exist." (Tumors of the Ovary, etc., p. 68.) Further, the ordinary pedunculated multilocular cyst of the ovary sometimes contain papillomatous growths, the result possibly of stray Wolffian relics. I have presented at least one such specimen to this Society, and I have seen others. On the other hand the multilocular ovarian cyst without papillomatous material has been found, in rare instances, to have invaded the hilum and broad ligament in its growth. Doran records two such cases. He says, "I have seen two cases where a sessile cystic tumor of the ovary was removed, and this proved to be an undoubted case of glandular cystic disease invading the hilum and broad ligament."

The case which I here report, is probably another instance of this pathological anomally.

Mrs. J. was sent to me by Dr. O. H. Adams, and entered my private hospital in April, 1887. She is 32 years of age, married, and has had three children, the last two (twins) eight years ago. Following her last labor she had puerperal mania, which necessitated her confinement in an insane asylum during four months. Four years ago she began to have attacks of sharp pain in the right ovarian region, radiating to the groin and down the anterior portion of the thigh. The pain was intermittent in character and cramp-like, lasting hours at a time, and was usually followed by a purulent, fetid discharge from the vagina, which would afford her great relief. At other times the attack would end with a profuse metrorrhagia, which would leave her pale and weak, but free from pain. About two years before coming under my care, she first noticed a "lump" in the right groin which has gradually increased in size. Sometime after she noticed a similar growth above the left groin. She was considerably emaciated and looked very ill.

Examination revealed a tumor as large as a child's head in the right iliac region and a smaller one in the left ovarian region. The tumors seemed to be fixed in the pelvis and to have a broad base attachment. They were immovable below but mobile above, and semi-fluctuating. Vaginal examination showed them to be so deeply attached in the pelvis and so intimately related to the uterus that I was unable to complete my diagnosis without anæsthesia. The patient was therefore placed in bed and ether administered, when it was found that the uterus was elevated by the tumor on the right side, with which it was connected. There was evident fluctuation though the tumor was thick-walled and very firm, almost hard. The lower surface occupied the position of the broad ligament at the side of the uterus. The same condition existed at the left side, but to a less degree. I diagnosticated sessile cystic disease of both ovaries or broad ligaments, and advised immediate operation, to which the patient gladly consented.

On April 13, 1887, I proceeded to operate, being kindly assisted by my friend, Dr. Daniel Longaker. When the tumors were exposed they were found to be so closely connected with the womb that they seemed to be one with that organ, which rested as a wedge between them. The Fallopian tubes extended outward over the upper surface of the tumors, while the broad ligaments and the greatly distended veins of the pam-piniform plexuses were expanded so as to apparently envelop them, the whole present-

ing a dark purple appearance, which was not at all reassuring. After separating some slight adhesions on the posterior aspect of the larger tumor, and rolling it forward, the nacreon surface common to the multilocular ovarian cyst was exposed to view. Selecting a spot on this free surface because it was less vascular, I now plunged a trocar into it, when about two pints of a tarry-looking fluid drained away. A more thorough investigation which the diminished size of the tumor now afforded, showed it to be adherent to the cæcum also. Previous to beginning the enucleation, I passed a long blunt needle charged with a double ligature through the expanded broad ligament at its least vascular portion between the uterus and the tumor, and as far below the Fallopian tube as could be done with safety. One side of the ligature was then drawn up and tied close to the uterus, including within its grasp the tube and vessels. Thus insured against hæmorrhage from that source, I now cut through as far as the ligation extended, and continued the enucleation down to the base of the tumor, and then outwards, finally separating it from the head of the colon. There was some bleeding from the numerous veins which were broken, but this was readily controlled by catch-forceps and ligatures.

Attention was now given to the tumor on the left side. This was found to be deeply imbedded in the pelvis and firmly fixed to the uterus, Fallopian tube, descending colon and rectum. The upper surface was covered with a net-work of distended veins, some of them as large as a quill. Enucleation of this tumor seemed too hazardous and hysterectomy was out of the question, for to do the latter the tumor must first be dissected from the colon and the pelvic floor, which was not practicable. I determined, therefore, to evacuate the contents of the cyst by aspiration, and then to shell out the lining membrane, or, failing in this to insert a drainage tube into it. But while endeavoring to find a position for puncture my finger passed into the tumor, low down on the posterior border of the broad ligament. Instantly the parts were flooded with a tar-like, semi-fluid substance similar to that which had been evacuated from the cyst on the right side. This was removed as quickly as possible by sponging. I then passed my finger through the opening which I had thus accidentally made, and after a careful and gentle dissection succeeded in removing the entire secreting surface of the cyst. Blood was now flowing from the small valvular opening in the broad ligament, but as it was apparently venous I hoped to check it by compressing the now flaccid folds of the broad ligament; for this purpose several large sponges were inserted and external pressure made upon them while the abdominal sutures were being placed. The sponges were then removed. There was still a slight flow of blood, but as it was doubtless only a venous oozing I concluded to close the wound and trust to pressure and the drainage tube. The patient was placed in bed and the tube carefully watched. During the next two or three hours several teaspoonfuls of quite bloody serum passed through it; after forty-eight hours the tube was removed.

This patient made a slow, but good recovery, and went home six weeks after the operation. She has been entirely relieved of her former sufferings, and the loss of weight and strength have been regained.

DR. WM. GOODELL reported

A CASE OF SPLENECTOMY.

Mrs. R., æt. 40, had chills and fever in early life, but after her marriage eighteen years ago she removed to a healthy country town and had no return of the disease. She has had two children, the youngest seven years ago. At this labor she had a serious flooding and was confined to her bed for six months from excessive prostration. Since that time she has never been well, being weak and miserable. Her monthly periods were always free and generally painful. Last March she had a very severe attack of what her physician called malarial fever, and her life was threatened by repeated attacks of hæmatemesis and hæmoptysis. A sore tumor was now discovered, which was pronounced to be a uterine fibroid, and she was sent to Dr. Goodell. He found the womb pushed low down and retroverted by a solid tumor, which started from the region of the right ovary and ran diagonally towards the splenic region. It entered the pelvis so low down as to cause bulging of the anterior wall of the vagina. The womb seemed to be independent of the tumor, for the former could be moved about freely with the sound; yet when the tumor was pressed upwards it conveyed motion to the womb, drawing it also upwards. The tumor was never free from pain and the complexion of the woman was markedly cachectic. The diagnosis was made of sarcoma either of the right ovary or of the omentum.

At the operation very long incisions were needed, reaching not quite up to the ensiform cartilage. The tumor was of a dark purple color and was attached in every direction by very long, tortuous and wholly denuded vessels, which looked like the largest earth-worms and were of analogous length. Most of the vessels came from the omentum, which had disappeared, apparently by being incorporated with the tumor and by having its connective tissue and fat removed by absorption, leaving the blood-vessels bare. These vessels were either single or else grouped in large bundles, and had all to be ligated. By them the tumor had evidently been nourished, for what looked like a pedicle was slender, long and twisted. It was lost in such a mass of livid veins that Dr. Goodell did not dare follow it up to its source. His diagnosis had been sarcoma of the omentum, but he was so uncertain of it that he sent the specimen to Dr. Formad, who pronounced it a leukæmic spleen. It weighed not quite 6 lbs. The woman did well for four days, then symptoms of embolism set in, the sputa became streaked with blood, and she died on the sixth day. So far as he can learn from the literature on the subject, his case was the eighteenth in which a leukæmic spleen had been extirpated, and all had died save one.

DR. HARRIS said that the case of recovery after operation for removal of a leukæmic spleen spoken of by Dr. Goodell had occurred under Dr. Franzo-

lini, of Medina, in Northeastern Italy. The proportion of leucocytes was small and probably accounted for the recovery of the patient. The diagnosis had been made before the operation.

DR. PARRISH had a few years ago seen a case of the late Dr. Wallace's, in which a diagnosis of fibroid of the uterus had been made. A tumor the size of the two fists was found near the side of the uterus. The patient developed peritonitis and was tapped by the assistant physician; some dark fluid was withdrawn. Death took place a few months after, the peritonitis having been cured. At the autopsy the spleen was found adherent to the uterus and to the pelvic brim.

DR. GOODELL called attention to the hæmoptysis and hæmatemesis in his case, which were the usual symptoms of a leukæmic spleen; but he had not been informed of them until after the operation had been performed, and therefore he did not have that clue towards forming a diagnosis.

(To be concluded.)

CHICAGO MEDICAL SOCIETY.

Stated Meeting, January 16, 1888.

THE PRESIDENT, W. T. BELFIELD, M.D., IN THE CHAIR.

(Concluded from page 210.)

CASTS OF THE TRACHEA AND BRONCHIAL TUBES

were exhibited by Dr. F. E. Waxham, who said: The specimen I have to present is a membranous cast of the trachea and of a number of the bronchial tubes. I take the liberty of presenting this specimen because it is very rare, indeed, that we succeed in securing a specimen of such extent as this.

The history of the case is this: The child, a little girl of 4 years, had a very mild attack of laryngeal diphtheria. She was convalescing nicely when the occurrence of a croupy cough and sawing respiration indicated very plainly that the larynx was becoming invaded, and within thirty-six hours it became necessary to perform intubation in order to prevent impending suffocation. For the first twelve hours after the operation the child did very nicely indeed, when a portion of the membrane became detached and the tube was expelled. It was necessary to at once reintroduce the tube, and the membrane was pushed down ahead of it; the child became blue, was unable to breath, and the tube was removed and this small cast was expelled. In the course of an hour it was necessary to reintroduce the tube on account of increasing dyspnœa. The child apparently did well for twenty-four hours, after which time there was a peculiar hoarse, frequent cough, which was induced with every change of position. This indicated loose membrane below the tube; the membrane was not entirely detached, but simply loosened, did not occlude the tube entirely, but sufficiently to give rise to this peculiar cough. It was deemed unsafe to leave the child in this condition, fearing the sudden detachment of the membrane and immediate suffocation, consequently the tube was removed, and after struggling and strangling, and coughing violently for a few moments, this large cast was expelled, which is a perfect membranous cast of the trachea and the large bronchial tubes. After the expulsion of this cast, it soon became necessary to reintroduce the tube, and the child did well for another twelve hours, when there was detachment of still more membrane, and it became necessary to at once remove the tube. The tube was removed and still the child was unable to expel the membrane. There was simply partial detachment of the membrane, it had curled up in the trachea and the child was unable to expel it. The child became blue and apparently on the point of suffocation, the tracheal forceps were introduced by the mouth, and a strip of membrane one and one-half inches in length was removed with the forceps, with immediate relief. In the course of an hour or so it was necessary to reintroduce the tube. The child died about twenty-four hours later from extension into the smaller bronchial tubes.

This is another cast of the trachea, not as extensive as the other, and yet a perfect cast of the trachea. When we have this tendency to extensive and deep exudation of false membrane, I believe the case almost invariably terminates fatally; there may be exceptions, occasionally a child after the expulsion of such a large cast may recover; there may be no reformation of the mass, and it is possible that the child may recover; yet these exceptions are few and far between, the termination is almost invariably fatal.

In considering these specimens an important question arises: Is it possible by any known method of treatment to limit or prevent the tendency through this extensive exudation after tracheotomy or intubation? We are all well aware of the fact, that the greatest danger after tracheotomy and after intubation is the extension of false membrane below the tube into the bronchi. I believe that by the use of the rubber coil, by the use of aconite, or veratrum viride or digitalis, it is possible to limit or control this tendency to extensive exudation. In this case no preventive treatment was instituted, but I shall no longer fold my hands after performing an operation and state that if the membrane extends below the tube the child will die, if it does not the child will get well. But I believe it is our duty to use every method possible to prevent or control this tendency to exudation. I believe that veratrum or aconite is indicated to keep the pulse below normal. It is particularly indicated in those cases where the system is not exhausted by the diphtheritic disease.

DR. J. A. ROBISON: As this was pharyngeal diphtheria, I can see very readily how the extension of the membrane down into the trachea occurred. It is, I believe, a fact that fibrinous casts occur in the trachea and bronchial tubes more frequently than diphtheritic casts. This fact, however, does not influence the treatment which should be adopted, but it does influence the method of operating somewhat, as, for instance, if we are satisfied that it is a case of diphtheritic exudation, we should favor the intubation operation rather than tracheotomy, because one of the great troubles in tracheotomy is the extension

of the diphtheritic membrane from the tracheal wound, whereas, in intubation we would not have this difficulty. And it does not seem to me in intubation we would be as apt to have the extension of the membrane downwards, as in tracheotomy. The great danger in intubation is the fact that the membrane is already there, while in tracheotomy there is a wound which is the starting point for infection. In this case I think the doctor has suggested a good method of procedure. Where intubation has been performed and it is discovered that there is an extension of the membrane into the trachea the proper thing is, on the appearance of dyspnœa or cyanosis, to remove the tube and in case the membrane is not expelled to use the tracheal forceps.

It has occurred to me that in addition to the remedies which Dr. Waxham has suggested, it might be well to try the effect of mercury. It is stated as a therapeutic fact by most authorities on the subject, that mercury has an effect in lessening fibrinous exudation, and it seems to me that it facilitates the elimination of these diphtheritic or fibrinous exudations by giving mercury to the point of salivation. Another remedy which might be used for lessening the heart-action and engorgement of the blood-pressure in the lungs, is calibar bean. This is a remedy which the profession uses very little except in tetanus, and yet I have noticed in several cases, especially of œdema due to catarrhal difficulties, that calibar bean given until it lowers the pulse from ten to fifteen beats per minute lessens engorgement of the lungs, and in cases of bronchitis where there is a good deal of swelling of the bronchial tubes, where there are sibilant and mucous râles, I have noticed these disappear very promptly on the administration of calibar bean, and it seems to me that it would be a valuable drug to try in these cases. The question arises in my mind, whether, when there is exudation or casts in the trachea or bronchial tubes, the administration of emetics is advisable in those cases where there is quite a degree of exhaustion, yet we can facilitate the expulsion of the casts by emetics if the patient is not too much exhausted.

DR. HOLMES: I wish to ask if there is not a way of introducing into the trachea tube, connected with a vacuum and by suction, engaging the membrane so that when the tube is withdrawn the membrane is withdrawn with it.

DR. WAXHAM: There are several methods of removing false membrane from the trachea. I do not know that there is an instrument corresponding to the one referred to. One is fitted with a rubber bulb at one end of a staff which is introduced into the trachea and then expanded, and by withdrawing the staff you remove the false membrane. Another instrument corresponds with the one that is usually employed in removing foreign bodies from the œsophagus. In all these instruments it becomes necessary to pass below the obstruction before it can be removed, and there is always the danger of crowding the membrane down ahead of the instrument instead of passing by it. I cannot see that these instruments are superior to the tracheal forceps. In the majority of cases when the tube is removed, the membrane will be expelled by the efforts of the child in struggling and coughing, but where it is not I find that I can usually grasp the membrane with the tracheal forceps and remove it.

NEW INSTRUMENTS.

A NEW BRACE FOR BOW-LEGS.

BY CHARLES F. STILLMAN, M.D.

CLINICAL PROFESSOR OF ORTHOPŒDIC SURGERY IN THE WOMAN'S MEDICAL COLLEGE OF THE N. Y. INFIRMARY; ORTHOPŒDIC SURGEON TO THE N. Y. INFANT ASYLUM.

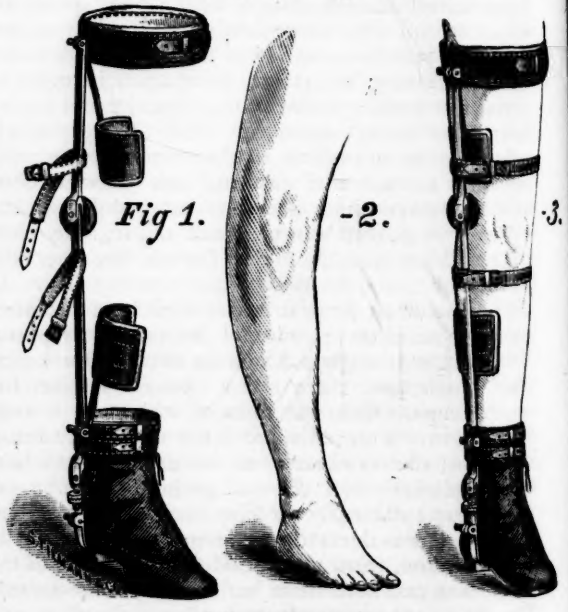
Bow-legs is a deformity so frequently met with in practice, that an extended description of the condition is not necessary to enable the practitioner to understand the action of the brace here introduced, and which has been devised by the writer.

Fig. A.—The bow-leg brace usually supplied by instrument-makers.

This brace differs very materially from the heavy double frame usually supplied by the instrument-makers (see Fig. A), which supports the limb without exercising much curative force upon the deformity itself.

As will be seen by reference to Fig. 1, it is constructed upon a new principle, viz., that of combining constant spring-pressure with the support, so that a constant force will be brought to bear upon the bowed limbs at their greatest convexities, this force being regulated by ratchets placed at the junction of the springs and the main frame of the brace (see Fig. 1).

The action of these springs is shown in Figs. 2 and 3 (although somewhat exaggerated for better il-



Stillman's Bow-leg Brace.

lustration), and the brace is also provided with ratchets below the ankle-joint, so that the position of the foot may be regulated in its relation to the leg, since inversion or eversion of the foot very often accompanies the condition of bow-legs.

"The Florence," 109 E. 18th Street, New York.

DOMESTIC CORRESPONDENCE

LETTER FROM NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

Cerebral Paralysis in Infancy—General Muscular Contracture in an Infant—Infantile Paralysis from Polio-encephalitis—Moral Obliquity in Childhood—A Book Agent with Small-pox.

There has recently been organized in the Academy of Medicine a Section on Pædiatrics, and its first scientific meeting was held January 25, with Dr. J. Lewis Smith, the Chairman, presiding. On this occasion the session was devoted to the subject of *Cerebral Paralysis in Infancy*, and an able paper, that he called a contribution to its study, was read by Dr. H. Seibert. In it he referred to three classes of cases in which the clinical manifestations were all due to atrophy of the brain, although in the first the trouble had its origin in an insufficient blood-supply, in the second in acute meningitis, and in the third in chronic meningitis.

In treating of the first variety he gave a detailed description of a case in which there was almost complete absence of muscular power existing from birth. Although born at full term, and without syphilitic or other taint, the infant was always puny and poorly nourished. When born the cord was found to be wound around the neck twice, and it was to the constriction thus made *in utero* that the cerebral atrophy was attributed. At 14 months of age the child died from capillary bronchitis, and when the brain was examined after death it was found that the layer of white matter was very thin, and the diagnosis of cerebral atrophy was abundantly confirmed by the microscope. In the course of his experience Dr. Seibert said he had met with four cases altogether in which there was congenital atrophy of the brain, but this was the only one in which he had been able to secure a full clinical history and verify the diagnosis by autopsy.

The second variety, he stated, was more common than the first, and of this he related two cases, in one of which a post-mortem examination was made. In this second class of cases the symptoms were similar in character to those met with in the first; but here the atrophy was due to meningitis resulting in exudation, arachnoid thickening, and sometimes moderate hydrocephalus.

The third class of cases, he said, was characterized by increased crying and moaning, with muscular contractions, and sometimes permanent episthotonos, though there were no general convulsions. The condition was due to chronic meningitis, steadily increasing, and causing abundant exudation on the cortex; but running its course without febrile movement. He narrated two cases of this kind, occurring in a brother and sister, and in one of them the diagnosis was confirmed by autopsy. After lasting for several months the affection terminated in heart-failure; the temperature in one case falling to 96° F., and in the other to 94°. In the case in which the post-mortem was made there were no tubercles or tubercle bacilli found.

At the meeting two cases of great interest were presented by members of the Section. The first one, by Dr. A. Caille, was one of *General Muscular Contracture in an Infant of Six Weeks*. The parents were both healthy, and this was the third child of the mother. The other two children were strong and well-developed in every way. This infant was born at full term, and the head was comparatively large, with a decided flattening on one side of the cranium; but the rest of the body was small and shrunken in appearance. The jaw, which was turned slightly to one side, could be opened to only a very limited extent (so that the child was unable to suckle), and there was general contracture of the muscles of both the upper and lower extremities.

Dr. A. Jacobi, after an examination of the child, which was exhibited to the Section, said that the condition present appeared to him to be the result of a meningo-encephalitis which had occurred during fœtal life. The contracture of the jaw somewhat resembled that seen in incipient trismus, although the spasm was not so marked as in that affection. The appearance of the cranium was very much like that met with in cranio-tabes in children a year or more old. He thought it was doubtful whether galvano-electric treatment would be of much service in such a case, and that an unfavorable prognosis must be pronounced; although a certain proportion of children presenting the condition vested in this infant (which was undoubtedly very rare), recovered.

The Chairman exhibited a case of *Infantile Paralysis* which he believed to be due to *polio-encephalitis*. The child was two years old, and had always been perfectly healthy, with the exception of an attack of diarrhœa, up to May last, when, at the age of sixteen months, while apparently quite well, it was seized with violent convulsions, which lasted from 6 P.M. to 3 A.M., and were accompanied with considerable febrile movement. After the stupor commonly following severe eclampsia had passed off it was found that the child had complete paralysis of the muscles on the left side of the body, including the facial muscles on that side. The recovery from the facial paralysis was complete, and took place rapidly, while there had been a gradual improvement as regards the muscles of the upper and lower extremities. At the present time the child was able to walk, though partly dragging the left leg, and there was still a spastic condition of the toes on the affected side.

Dr. Smith said that it was his opinion that some of the cases resembling this which had been reported as due to cerebral inflammation, were in reality instances of cerebro-spinal meningitis. Ever since

1871 epidemic cerebro-spinal meningitis had had a permanent foot-hold in the city, and New York children were therefore constantly liable to be attacked with it. In the present case, however, the patient was a resident of Long Island, and, consequently, not being subject to the influences giving rise to cerebro-spinal meningitis, he thought the latter might be excluded here. It was thus evident that the condition noted must have had a local cause, and, judging from the history of the case, and the symptoms described, he was inclined to the view that it was one of infantile cerebral paralysis, or polio-encephalitis, described by Strümpel. One of the characteristics of this affection, according to the author named, was that the tendon reflex was not only not impaired, but became exaggerated, and this was found to be the case in the present instance.

Dr. Sachs said it appeared to him that simple meningeal hæmorrhage would offer a more satisfactory explanation of the phenomena noted in this case than polio-encephalitis. As a result of the latter condition there almost always followed more or less mental impairment, while after meningeal hæmorrhage the condition of the intellectual faculties, as a rule, remained unaffected. Still, the exact diagnosis was difficult to decide in such a case, and he thought it would be impossible to arrive at any definite conclusion here until an investigation of the electrical relations presented had been made.

Dr. Jacobi said that after hæmorrhage the presence or absence of mental impairment would depend, first, on the size of the clot; and second, upon the amount of consecutive inflammation. When there was much mental impairment, it was to be inferred that there had been considerable encephalitis following the hæmorrhage. In this case, he said, he was very much inclined to think that the severe convulsions gave rise to the hæmorrhage, which caused the paralysis. As to the advantage of studying the electrical relations here, he did not believe it would throw much light upon the diagnosis.

Dr. Smith having stated that it was the marked febrile movement described as accompanying the attack of eclampsia which had principally led him to decide in favor of polio-encephalitis, Dr. Landon Carter Gray, of Brooklyn, said that the exact diagnosis of hemiplegia in children was attended with much obscurity. Personally he was very doubtful whether the condition described by Strümpel occurred very often, and he believed that the statements which this authority made were founded to a large extent on mere speculation. The most that we could say was that in children the site of the trouble was apt to be in the cortex of the brain, and usually in the motor region. It was generally impossible to make a differential diagnosis, and at autopsies he had more than once had occasion to congratulate himself that he had not attempted during life to decide between encephalitis and meningitis. The whole matter was entirely unsettled, and in the present state of our knowledge, on account of the great liability to make mistakes, he thought it was more scientific not to venture upon a precise diagnosis in such cases. From a practical point of view it made very little difference what the exact pathological condition present was.

As an instance of moral obliquity in childhood, the case of the little girl who recently made several attempts to burn the Hospital for Ruptured and Crippled, without the slightest ostensible pretext, has not often been excelled. On the evening of the last Sunday in January she really succeeded in causing quite a serious conflagration, and it was only by the presence of mind of the physicians and nurses of the hospital, and the powerful and efficient services of the Fire Department, that the inmates were rescued from the burning building, while the head cook of the institution, whose presence in the house no one seemed to think of until too late, was suffocated in her bed. The sacrifice of a human life would have seemed sufficient to at least deter the youthful incendiary from any further attempts in this direction, but, undaunted by the catastrophe, she made four or five more during the next few days, when she was finally detected and a stop was put to her pleasing methods of amusing herself. The child, who is 11 years of age and has been under treatment for torticollis in the hospital for nearly three years, is said to have always been unusually bright and intelligent, and to have become a general favorite among the inmates and attendants on account of her pretty face and attractive manners.

A case just brought to light illustrates in a striking manner the way in which people in a large city may be exposed to the danger of contagious diseases without any suspicion on their part or of those liable to communicate the infection. A book agent applied at the dispensary of the New York Polyclinic for treatment for what he supposed was some ordinary form of skin disease, but which was found on examination to be small-pox. After being removed to the Reception Hospital the man stated that he had been sick ten days, and that during the whole of that time he had been canvassing for subscriptions to a book; visiting mainly banks, insurance companies and other business offices in the lower part of the city.

P. B. P.

INFLAMMATION ABOUT THE CÆCUM.

Dear Sir:—The subject of inflammation about the cæcum has always been one of intense interest to me, and I have therefore greatly enjoyed the series of papers read before the Philadelphia County Medical Society and, with the discussions thereon, published in THE JOURNAL for January 21. During the past four years it has been my fortune to have charge of five cases of cæcal or pericæcal inflammation; and while I do not, of course, expect my opinion to carry much weight when opposed to that of so excellent an authority as Dr. Thos. G. Morton, I desire to place on record my protest against the summary manner in which he condemns the use of the aspirator in these cases.

In my first case—which I did not see until the trouble had existed a week or ten days—there was a very pronounced enlargement in the cæcal region, with flexion of right thigh, etc., and the diagnosis was

plain. The aspirator was used on several successive days, bringing away on each occasion several ounces of fæcal-smelling pus. As there was no diminution in the amount of pus formed, a free incision was then made into the tumor and good drainage secured. The result was death from acute peritonitis.

In two cases following this I used the aspirator *early*—that is, as soon as the diagnosis was definitely made—and in each of these cases a small amount (not to exceed 1 drachm) of pus was obtained, and from the hour of the aspiration convalescence began.

In the other two cases there was no well-defined tumor, and they were treated with opiates, warm fomentations, and the internal administration of calcium sulphide, with recovery after about three weeks in each case.

While this is a very limited experience in this disease, it has been large enough to convince me, at least, that the aspirator has a place in the treatment. Certainly the early use of this instrument is attended with less risk than would be the case from laparotomy. Besides, it in no way interferes with the subsequent abdominal incision, if the aspirator fails to give relief.

I notice that Dr. Morton, as well as several other recent writers, condemns the old plan of treating peritonitis and kindred abdominal affections by the administration of opium, and urges instead the use of saline purgatives. This seems like progress indeed! and if this new plan is at all successful "down East," I can only account for it on the theory that people in that region are differently constructed from those in the "wild, woolly West." I have several times known of the purgative plan having been tried in this region of country, by men who were commonly called irregular practitioners, and the result was in each instance very disastrous to the patient.

M. G. Sloan.

Dexter, Iowa, January 31, 1888.

PTERYGIUM: A NOTE ON ITS CAUSATION AND TREATMENT.

Dear Sir:—The comparatively recently promulgated theory of Poncet that pterygium depends upon the development of a microörganism is of sufficient importance to be worthy of the support or antagonism of confirmatory or controverting facts, and as bearing upon this question I offer for consideration the following case:

Jan. 3, 1887, Walter M., æt. 15, presented himself for treatment with the following history: He had been a puny infant, and at 3 years of age there was noticed upon the outer aspect of either eye a small tuberculated eminence at the corneal margin, from which, as an apex, there spread out toward the outer canthus a triangular mass of vascular and fibrous tissue. The cornea becoming more involved they were excised, four years later, by a surgeon of Indianapolis. Immediately upon the cicatrization of the wounds it became evident that the disease had not been eradicated, inasmuch as it began to return and within a few months had attained its former proportions.

On examination it was found that the elevated apex was located just within the corneal margin of either eye, beyond which was a milky haziness involving one-half of the corneal surface of the right eye, and one-third of that of the left. The bases of the triangles were of considerable breadth, and towards the apices ran numerous prominent blood-vessels. The growths were soft, and with none of the fibrous material said to have been present before the first operation, and which is usually present in pterygia.

After preparatory treatment the patient was placed in the operating chair, a 4 per cent. solution of cocaine instilled into the right eye, the diseased mass thoroughly crushed and lacerated with toothed forceps and calomel applied to the raw surface, which local application was continued at intervals subsequently. Considerable irritation followed but the growth rapidly and completely disappeared. Three weeks later the opposite eye was subjected to the same procedures and with like successful result. The cure remains perfect.

This case, although it does not demonstrate the existence of microbes in the diseased tissues, yet it offers strong inferential evidence of their presence and that they were destroyed by the germicide, calomel. The laceration of the tissues may have allowed access of the salt to the parasitic colonies.

Edward F. Wells, M.D.

Shelbyville, Indiana, Feb. 13, 1888.

ASSOCIATION ITEMS.

AMERICAN MEDICAL ASSOCIATION.

The Thirty-ninth Annual Session will be held in Cincinnati, Ohio, on Tuesday, Wednesday, Thursday and Friday, May 8, 9, 10 and 11, commencing on Tuesday at 11 A.M.

"The delegates shall receive their appointment from permanently organized State Medical Societies, and such County and District Medical Societies *as are recognized by representation in their respective State Societies*, and from the Medical Department of the Army and Navy, and the Marine Hospital Service of the United States.

"Each State, County, and District Medical Society entitled to representation shall have the privilege of sending to the Association one delegate for every ten of its regular resident members, and one for every additional fraction of more than half that number: *Provided*, however, that the number of delegates for any particular State, territory, county, city or town shall not exceed the ratio of one in ten of the resident physicians who may have signed the Code of Ethics of the Association."

Secretaries of Medical Societies, as above designated, are earnestly requested to forward, *at once*, lists of their delegates.

Also, that the Permanent Secretary may be enabled to erase from the roll the names of those who have forfeited their membership, the Secretaries *are by special resolution*, requested to send to him, an-

nually, a corrected list of the membership of their respective Societies.

Sections.—"The Chairman of each Section shall prepare an address on the recent advancements in the branches belonging to his Section, including such suggestions in regard to improvements in methods of work, and present, on the first day of its annual meeting, the same to the Section over which he presides. The reading of such address not to occupy more than forty minutes. . . . "—*By-Laws.*

Practice of Medicine, Materia Medica and Physiology: Dr. [1]——, Chairman; Dr. N. S. Davis, Jr., 65 Randolph St., Chicago, Ill., Secretary.

Obstetrics and Diseases of Women and Children: Dr. Eli Van De Warker, 45 Montgomery St., Syracuse, N. Y., Chairman; Dr. E. W. Cushing, 1 Hotel Pelham, Boston, Mass., Secretary.

Surgery and Anatomy: Dr. Donald McLean, 72 Lafayette Avenue, Detroit, Mich., Chairman; Dr. B. A. Watson, 124 York St., Jersey City, N. J., Secretary.

State Medicine: Dr. H. B. Baker, Lansing, Mich., Chairman; Dr. S. T. Armstrong, U. S. M. Hosp. Service, Secretary.

Ophthalmology, Otology and Laryngology: Dr. F. C. Hotz, 181 Clark St., Chicago, Ill., Chairman; Dr. Edw. Jackson, 215 S. 17th St., Philadelphia, Pa., Secretary.

Diseases of Children: Dr. F. E. Waxham, 3449 Indiana Ave., Chicago, Ill., Chairman; Dr. W. B. Lawrence, Batesville, Ark., Secretary.

Oral and Dental Surgery: Dr. J. Taft, Cincinnati, Ohio, Chairman; Dr. E. S. Talbot, 125 State St., Chicago, Ill., Secretary.

Medical Jurisprudence: Dr. E. M. Reid, 243 N. Fremont St., Baltimore, Md., Chairman; Dr. C. B. Bell, Suffolk, Mass., Secretary.

Dermatology and Syphilography: Dr. L. D. Bulkley, 4. E. 37th St., New York, Chairman. Dr. S. F. Dunlap, Danville, Ky., Secretary.

A member desiring to read a paper before a Section should forward the paper, or its *title* and *length* (not to exceed twenty minutes in reading), to the Chairman of the Committee of Arrangements at least one month before the meeting.—*By-Laws.*

Committee of Arrangements.—W. W. Dawson, Cincinnati, Ohio, Chairman.

WM. B. ATKINSON, M.D.,
Permanent Secretary.

Philadelphia, 1400 Pine St., S. W. cor. Broad.

SPECIAL COMMITTEES TO REPORT AT THE CINCINNATI MEETING OF THE AMERICAN MEDICAL ASSOCIATION.—As appears from the programme of the general sessions, published last week, there are three special committees, in addition to the standing committees, to report at the next meeting of the American Medical Association. The membership of these special committees is as follows: Committee on Fœticide, and Measures for its Prevention, I. N. Quimby, of New Jersey; W. B. Atkinson, of Pennsylvania; W. H. Byford, of Illinois. Committee on Duties Commonly Exercised by Coroners, H. O. Marcy, of Massachusetts; J. H. H. Burge, of New York; W. W. Dawson, of Ohio. Committee on Dietetics, E. A. Wood, of Pittsburg, J. T. Whittaker, of Cincinnati and F. Woodbury, of Philadelphia.

[1] Vacant.

MISCELLANEOUS.

THE MISSISSIPPI VALLEY MEDICAL MONTHLY, published at Memphis, Tenn., has changed its name to the *Memphis Medical Monthly*, but continues, as heretofore, under the able editorial management of Drs. Sim and Neely. The change of name is a decided improvement.

THE GERMAN CONGRESS AT WIESBADEN.—The seventh annual German Medical Congress will meet on April 9 to 12 at Wiesbaden, under the Presidency of Professor Leube, of Würzburg. The following subjects for discussion are announced: "Chronic Diseases of the Heart-Muscle, and their Treatment," by Oertel, of Munich, and Lichtheim, of Berne; "Alcohol as a Remedy," by Binz, of Bonn, and von Jaksch, of Gratz; "Prevention and Treatment of Asiatic Cholera," by Cantani, of Naples, and A. Pfeiffer, of Wiesbaden. Papers are promised on: "Floating Heart" (Wanderherz) by Rumpf, of Bonn; "Experimental Researches on the Mechanism of Respiration," by Unverricht, of Jena; "Combined Degeneration of the Spinal Cord," by Adamkiewicz, of Cracow; "Experimental Contributions to the Dietetics of Digestive Disorders," by Jaworski, of Cracow; "Treatment of Basedow's Disease, and on the Diagnosis of Renal Tumors," by Stiller, of Buda-Pesth; "The Excretion and Solution of Uric Acid," by E. Pfeiffer, of Wiesbaden; "The Pathogenesis of the Epileptic Fit," by Binswanger, of Jena; and "On Cryptogenetic Septico-Pyæmia," by Jürgensen, of Tübingen.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U. S. ARMY, FROM FEBRUARY 11, 1888, TO FEBRUARY 17, 1888.

Capt. Wm. H. Arthur, Asst. Surgeon, leave of absence extended two months. S. O. 35, A. G. O., February 13, 1888.

First Lieut. Nathan S. Jarvis, Asst. Surgeon, ordered from Ft. Lewis, Col., to Ft. Leavenworth, Kan. S. O. 30, A. G. O., February 7, 1888.

OFFICIAL LIST OF CHANGES IN THE MEDICAL CORPS OF THE U. S. NAVY, DURING THE WEEK ENDING FEBRUARY 18, 1888.

Asst. Surgeon F. W. Olcott, detached from the "Minnesota," and to the "Atlanta."

Surgeon T. C. Heyl, ordered to the receiving ship "St. Louis."

Surgeon H. M. Martin, detached from the "St. Louis" and to the "Swatara."

Asst. Surgeon Chas. F. Webster, ordered to the receiving ship "Vermont."

Asst. Surgeon James G. Field, detached from the "Vermont" and to the "Swatara."

P. A. Surgeon Robert Whiting, detached from the "Iroquois" and to the Coast Survey.

Asst. Surgeon Elmer C. Tracy, resigned, to take effect immediately.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE U. S. MARINE HOSPITAL SERVICE FOR THE TWO WEEKS ENDING FEBRUARY 18, 1888.

P. A. Surgeon Eugene Wasdin, relieved from duty at Marine Hospital, Chicago; ordered to Marine Hospital, Mobile, Ala. February 16, 1888.

Asst. Surgeon Seaton Norman, relieved from duty at Marine Hospital, New York; to assume charge of the Service at Evansville, Ind. February 6, 1888.